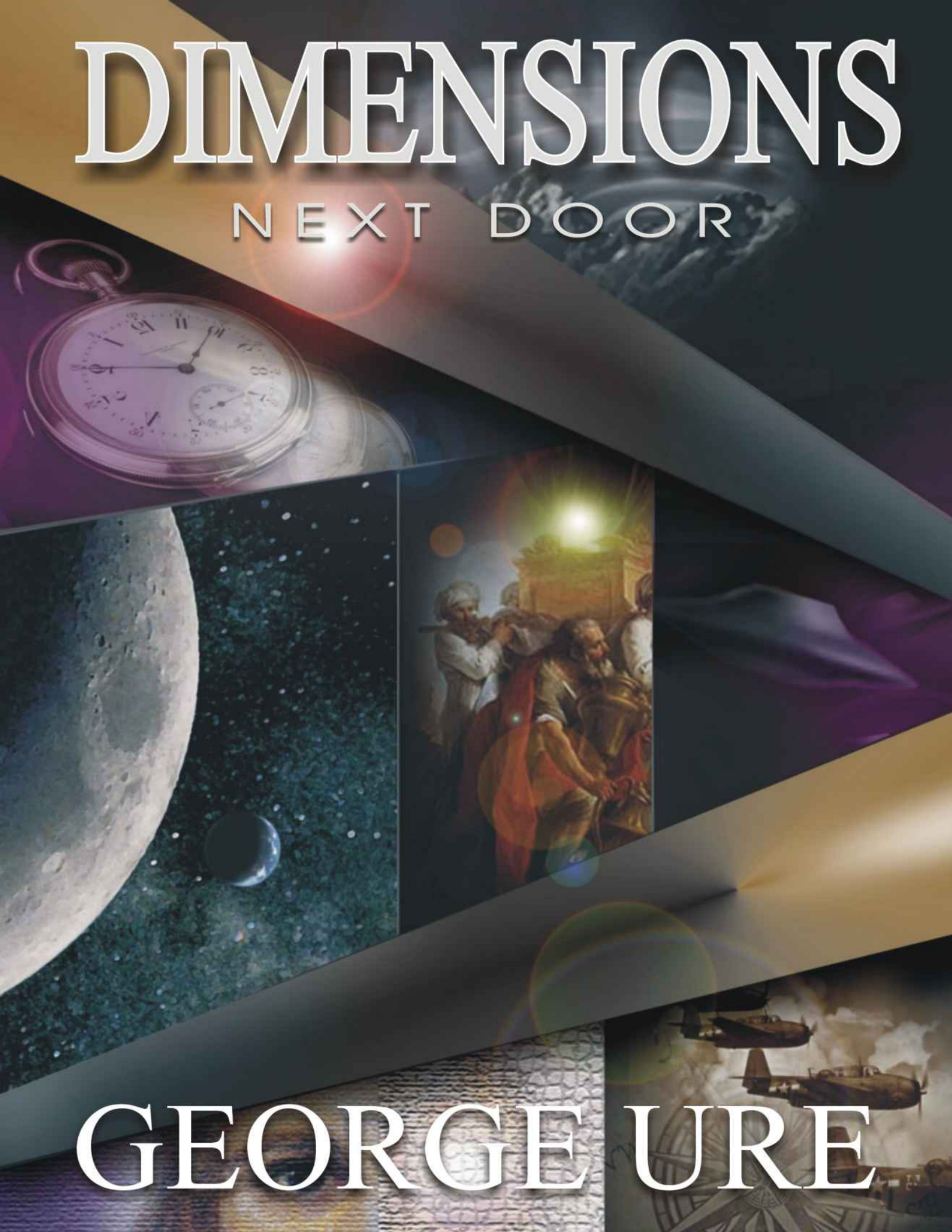
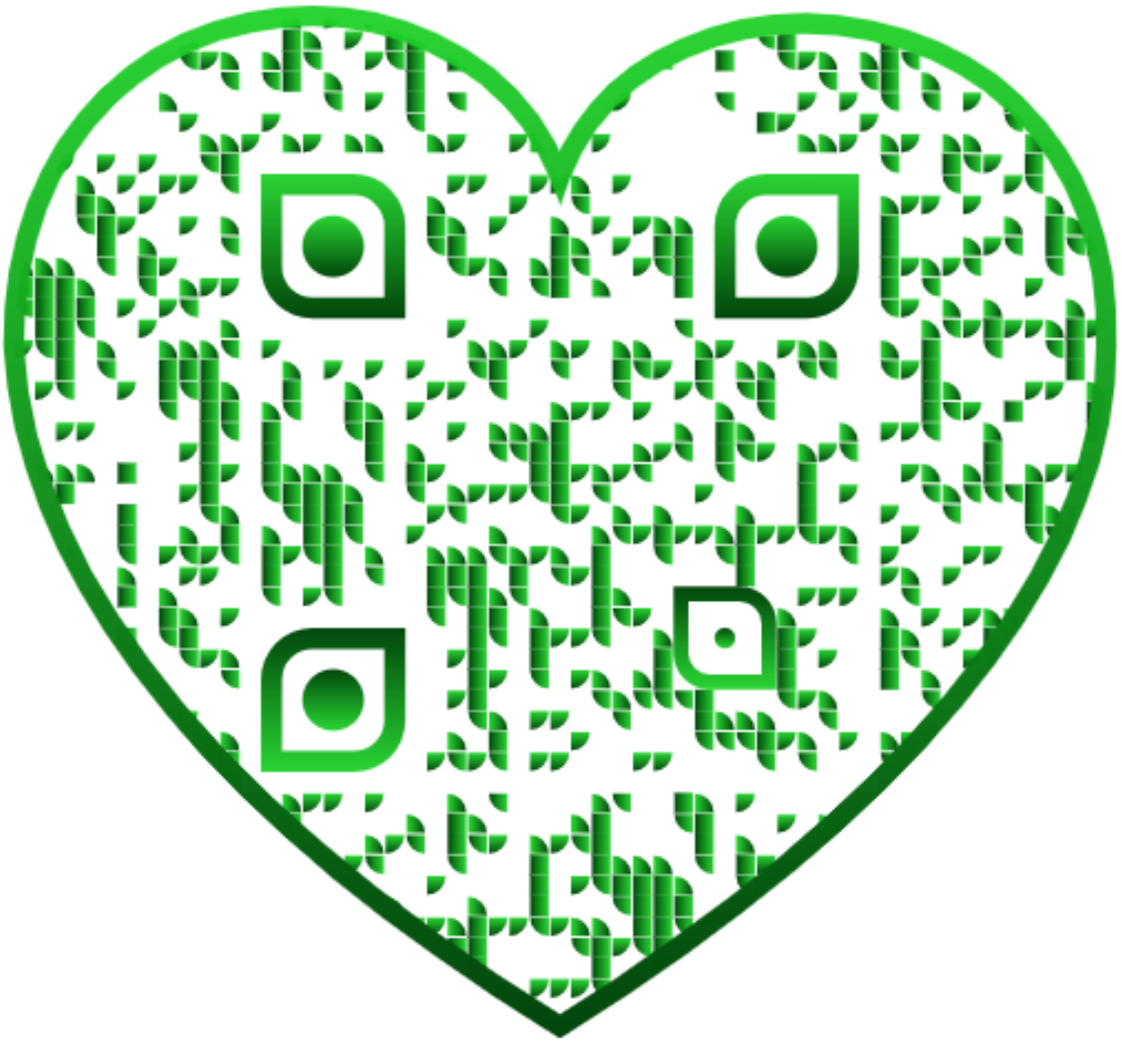
DIMENSIONS

NEXT DOOR



GEORGE URE



Dimensions Next Door

Hacking Space-Time?

George A. Ure, MBA

© 2017 all rights reserved

www.urbansurvival.com

www.peoplenomics.com

Notice of Invention:

This entire book constitutes the Inventor’s Notebook of George Alex Ure.

As such, it may reveal important baseline data and concepts that may be applicable to future patent filings in the field of acoustics, piezo electrics, and low-temperature plasma generation.

Table of Contents

Notice of Invention:
Why this Book -- and a Warning
(Introduction) You Need a Tool Kit
Extensible Thinking and Improved Generalizing Skills
Part 1: Sifting Through Data
1. It Helps to Die
Been There, Dead That
2. Encounter with a Long-Delayed Echo (LDE)
3. Quantum… Sense and Nonsense
Are We Talking God or Physics?
Trouble in Mindset
4. Dimensions of the Wavefront
Acoustical Levitation and UV Breakdown
Materials at Extremely High Frequencies
5. Electric Beings on a Wavefront
How Much Does a Soul Weigh?
Und Zo…
Serial Port, Optical Cable, or String?
6. Stalking the Simulation: Where is the Key?
Time and Dimension Data Reports? Seriously?
7. Bermuda Triangle
8. A Quick Course in "Earth Electricity"
9. Bruce Gernon's Flight Through "Electronic Fog"
Suspected Phenomenon #1: AUTEC/SAGE Radar
Suspected Phenomenon #2: RF-Triggered Piezo Effects
10. Philadelphia Experiments: Three ship Monte
Was the Philadelphia Experiment Early Stealth Technology?

11. Montauk Project Data
12. PBM, LLLT and “The Light Crown Project”
The "Light Crown" Project
Reflections on the Light Crown
The Odd World of Terahertz Waves
13. The Hutchison Effect and Experimental Methods
“Statitronics” Experiments
14. EVP’s & Edison’s Dead
Is EVP Real?
15. A Short Phenomenon Recap
Part 2: Application of Electronic Fundamentals
16. Mixers, Heterodynes, Superheterodynes: Why They Matter
Mixers Are Meaningful
Why Mixers Matter So Much
The Art of Multiplexing
Part 3: Analysis and Exploration
17. Life and Death as a “Frequency Matrix”
18. Frequency Stacking: Gernon and Philadelphia
A D.C. Component
Low Frequency Spectrum
19. An Acoustical Aspect Clarifies
A Visit from a Monk?
Tibetan Levitation
Studios and Standing Waves
Where is “A?”
A Third Class of Waves
Description of the New Effect
20. Engineering Levitation and Time Fields
Thinking like an Acoustical Engineer
21. Designing the Experiments

Higher Frequency Prospects
Road Noise/Time-Travel Stories
What's the Beat?
Problematic Frequency Tables
22. Spectral Engineering of the Experiments
23. Concurrent Coral Castle Experiments
B-fields and Coral Castle?
24. What we Expect
Ark of the Covenant: An Acoustical Device?
25. Proposed Conclusions of This Book
The Enfolded Universe?
One Final Research Note
26. Appendices
Appendix 1: Notes of Matrix Thinking
Appendix 2 Statitronics Experiment Notes, Ure 2004
Appendix 3. Kjellson's Two Instrument Levitation Description
Appendix 4: Approximate Frequency Conversions
Appendix 5: Tire "Thump" Gating Frequencies
Other Books by the Author

Why this Book -- and a Warning

For all my adult life, I've been an active reader and the best fiction of all is that based, at least in large part, on *facts*.

In my first novel, *DreamOver*, I had all the facts I needed at hand. I've physically "*been there*" – to most of the places described in the book. In a few spots, such as the super-secret spy submarine, I had to '*wing it.*' But, since I've been aboard three submarines (one of which was Russian) the details even here flowed smoothly and naturally.

The planned second novel in the David Shannon adventures series proved more difficult. The plot involves an eccentric inventor who, after some odd revelations, overcomes *gravity*.

In doing so, there are many familiar elements: flying, computers, airline management, emergency response, wandering of the West, ham radio, and a host of other personal skills and experiences. But *something was missing*.

I needed a credible, science-based approach to the anti-gravity problem so central to my next book's theme. I went looking for ideas and the facts turned into a book.

There was, in fact, so much data to be "stitched-up" that a non-fiction book was required to some of the concepts that would appear in the novel.

What's presented here is also 'just damn interesting.' So much so, that as the book came to its logical conclusions in late 2017, I had to invest in test equipment required to do more than simply 'read sources.' I'm spending hours in "*Old Man Labs*" now. Like a gold miner, I know there's a nugget in there…it's just a matter of panning till it appears.

You see, a major fault with most *novels* is they don't take care of the '*loose ends*' neatly. When a story needs a "fact" for a fiction plot, one is usually made-up on-the-fly. It's always been a 'tell' of an author's depth to many readers.

There was a sense of '*guided by a Higher Power*' in writing this book. Although it was a major task, it has flowed gently into my life. Along with

help from my wife Elaine, long-time colleagues including several retired military officers, a doctor with key IP in both optometric surgical implements and low-level laser light therapy, it at times felt like the book was just *materializing* into what you now hold.

Now to the warning: Please be advised that this book searches deeply into what conventional wisdom refers to as *woo-woo*. By the time you're done reading it, your worldview may be altered. *Woo-woo* often has basis in *fact.*

The book's mission is simple: We analyze a broad range of frequencies (direct current (D.C.) to the furthest reaches of alternating current (A.C.) and from there on up through terahertz waves, infrared, and ending past far ultraviolet. A long visit to the audio realms follow – but with good reason.

You may see hints at how we have "*lost our way*" in physics. We hope to 'bust through' to *new realities.* That's difficult, though, because our species was bred to "*keep walking in the same ruts."* Thanks, Darwin, for explaining that. It's why standard gauge train tracks are similar in width to Roman centurions marching two abreast.

An old friend used to say, "*If you always do what you've always done, you'll always get what you've always got!"* She was right.

Movies, like *The Matrix* and concepts like those in the Disney flick *Tron,* began breaking down the walls of convention. So, did *Back to the Future*. However entertaining, the scientific infrastructure was largely fictionalized. Those damn "loose ends" we were mentioning.

What have we been *missing*? There's the mission.

Unable to find a book that presented a "Master Overview" of how the entirety of the D.C. (direct current) to Daylight spectrum "*dances together*" we cobbled up this. By *dancing*, we're not talking about a *single* medium, either. Waves moving *through air* (sound and ultrasonics) along with electromagnetic (E-M) waves that *move through space-time*. Such waves move through gold and quartz – the waves are all-pervasive. Some claim movement is *through the ether* (or aether), while others prefer the *Dirac Sea*. Commonality is what we need: Waves and media – and that's the trick shot.

There's a macro-level humanitarian need for such investigation. Earth is

running out of resources. We need a way to get off this planet, re-orient ourselves to a non-local way of thinking, de-compress, de-monetize, and challenge ourselves as a world to '*pull together*.' Wet dream? Or doable? We have suffered too long under systems of divisive and exploitive politics. As a bonus? The potential payoffs are cheaper than rocketry and less messy than nukes.

To approach the problem, this book has three sections. The first is an accumulation of "*piles of raw data*." This data comes from many disciplines and sources spanning a Biblical-sized historical period.

Section Two presents basic electronic theories and principles. These will give you new ways to think which in turn will foster fresh intuitions and speculations. Then we head for the lab and design experiments to start down the discovery trail.

The problem is one of size: The methodically-structured line of inquiry I'm suggesting could run lifetimes. Still, it could be worth it unless you're fond of '*walking in the ruts.*'

There are too many pointers to the existence of ***Dimensions Next Door*** to be ignored. Dimensions which every major religion expounds on, yet we have failed at the *engineering level* to reduce once again to practicum. Perhaps we need to "kick-it" and try to look with fresh eyes. Eyes not shaded with cultural blinders.

Will we be able to hack *space-time*?

It has likely already *been done*. Yet, shrouded in mysticism and religious doctrine, there lies a body of evidence that screams "Yes!" But not for common folk.

To translate doctrine into current technology and society? We might be facing up to several billion experiments between here and there.

Life is only 20,000 days for most of us. This effort is almost *Arthurian* in scope. It beats the hell out of couch-warming and being yet-another *useless eater* among a race of "*icon-pressing-apes*" possessed by a runaway social media hive-mind generating non-stop social delusions and dragging us all toward mass insanity.

It’s time to change. We need to get back in the labs.

(Introduction) You Need a Tool Kit

[**High-level:** To effectively research unorthodox material, it helps to have an unorthodox point of view. So, let's start there: UFO's and how schools limit thinking.]

The modern UFO Age began June 24, 1947 when pilot Kenneth A. Arnold spotted nine unusual craft weaving through the mountainous area surrounding Mount Rainer, Washington[1]. When Arnold later referred to the objects as like skipping discs, or *saucers*, the news media went nuts.

This book is *not* about UFO's *per se* but rather it's an adventure in how humans observe, collect and process information. We pigeon-hole things in error, too.

While the UFOlogists of today make wild suggestions about the Arnold sighting, few pay enough attention to the *scientifically quantifiable* details at hand.

For example, when you ask, "*What kind of airplane was Arnold flying?*" most people have no idea. Stares follow and then questions like "*How could THAT matter?*"

Yet, this is exactly and precisely the kind of detail that likely *does* matter.

Just so you know: Arnold was flying a single-engine *CallAir* A2 aircraft built by the Call family of Wyoming. Ready to begin production in 1940, the aircraft were not actually produced until shortly after World War II[2]. Arnold's model, the A2, was equipped with a four-cylinder Lycoming 0-290 engine. Configured as a two or three-place airplane, it was one of 16 that were built.

We can also analyze more detailed information. For example, the aircraft is presently preserved by the North Cascades Vintage Aircraft Museum in Concrete, Washington (northeast of Seattle).

The *CallAir* was a steel tube, fabric-covered airplane and had a rated service ceiling of 15,500 feet. Although the engine could produce 125 horsepower at sea level, pilots know once above 5,000 feet, or so, the power output derates

as the air thins-out higher up. So, we would expect that at Arnold's cruising altitude, the rate of climb available would be barely 200-feet per minute. That's science.

The North Cascades Vintage Aircraft Museum offers additional facts about this particular *CallAir A-2*. It's tail number (FAA registration) N2907V manufacturer Serial Number 123[3]:

- Empty Weight- 981 lbs.
- Gross Weight- 1550 lbs.
- Cruise Speed- 105 mph
- Stall Speed- 50 mph
- Range- 300 miles

For the purposes of this book, this is *interesting* data to have available because in a later chapter, we will explore another aircraft's encounter with the unusual – *time travel.* That's a case where a highly credible pilot wrote an extensive book-length account of how he, and two passengers, survived flying an apparent *time warp* in the Bermuda Triangle not too far from Bimini…

How is this data relevant to our "tool kit" to help write a novel about gravity?

It comes from a different way of *thinking*. Bible scholar Chuck Missler describes it as different than the Sethite view[4]. This view *imputes* (meaning projecting human contexts) into Scripture. It's a view that imparts error. Scripture *is what it is*.

I understand this at a deep, personal level because I have seen the value of taking grand historical books, and specifically the Bible, at *face va*lue. My late father, George Burnell Ure, was a deacon in our Danish Lutheran church when he was in the Seattle Fire Department. One of his favorite stories, when teaching Sunday school class, was how the biblical *Burning Bush* turned out to be based on *facts*.

He cited a 1956 *Time Magazine* article revealing how Texaco, following the description laid out in the Bible, had found natural gas seeps in exactly the area written of *more than 2,000 years ago*.

That made a tremendous impression on me as a child. It told me, in so many

words, that when it comes to “science”, it is important to *keep an open mind* and never stop looking at the basic data, because if you do, “You’ll miss something that is *obvious*.”

Few realize it, but such petrochemical seeps are also thought to have powered the insights of the Oracle at Delphi; another kind of “seeing.” Euphoria and anesthesia seem to be next-door neighbors of *The Future*.

Growing up, my education tracked toward electrical engineering, having experimented with lasers in 1965. This was in the basement of the University of Washington Electrical Engineering building where we did crude holograms with low-powered ruby continuous wave (CW) lasers. Brewster’s Angle[5] was important, after all. Still is, and ever-more so with fiber optics.

Later, I became disenchanted with the engineering discipline after I enrolled at Seattle University.

There, I was bored to tears. Already armed with an early electronic calculator, I was subjected to what I can only describe as “*slide-rule abuse*.”

Wielding my First-Class Commercial F.C.C. license, and employed as assistant chief engineer of an AM station from age 16, I insisted on using available professional tools that *any* working engineer would adopt. My tool? A small hand-held calculator with tiny red LEDs. I had one of the first. Cost a bundle, too.

Seattle U. held other views. It didn’t *matter* that I was already employed as a broadcast engineer, nor did it matter that I could answer problems faster (and with greater precision) than the instructor.

Instead, *school policy* that dictated “Everyone who is in the Engineering program learns to use a Slide Rule and master simple problems like *vectors of force* and *friction coefficients*.” I had run into the first deep ruts of *old-way thinking*.

Along with useless studies, like required philosophy classes, led to my dropping out. They were teaching the *old paradigm* and even at age 18, I wanted no part of it. Nor do I today. We don’t go back: Onward and upward.

In retrospect, dropping-out was a good decision. In the 50-years since that

group-think encounter, two great Truths became apparent.

First: Many *institutions* have a "*the way it's done around here*" attitude. Computer industry colleagues distilled it to the initials NIH – *not invented here* syndrome.

Even today, this pernicious bias to group-think has perverted "*science*" by requiring "*peer-review*" for conclusions to be "*acceptable*." Control the peers and you own the wagon ruts of thinking. Schools tend to fund only wagon-rut studies – those that rehash the existing paradigms.

As a result, great minds are dumbed-down to just barely above the average of their reviewing peers. Yuck! It's wrong, it's slow (glacial at times) but it results in "science" being stable enough for financial interests (particularly in medicine and electronics) to "manage" markets and exact huge profits.

The second Truth to emerge? 50-years of electronics which has included engineering multi-track studios in Los Angeles, broadcast engineering positions in multiple AM/FM radio stations, as a journeyman radio & electronics mechanic for a major airline, and as a long-time Extra Class ham radio operator, I have NEVER - NOT ONCE - needed to figure *force vectors* and *friction coefficients* on a sloping surface.

Nor did the problems appear when I returned to school in my late 30's for an MBA with an emphasis in longwave economics.

These facts personally confirmed to me that the Education System taught what *was convenient*, not that which rapidly moves the *state-of-the-art forward*, except at the glacial, grant-funded, IPO-planned speed.

The most successful people I have met – some of whom are multiple patent-holders on technologies we use every day – readily admit to this absurdity when cornered. But, they "*play the game*" because it's a "*go along to get along*" world, and they have a much higher tolerance for B.S. than I do. They seem to have fatter bank accounts than me, though, so who's the fool?

For the past 40-years, I have not only studied the *subjects* that interest me, but also the *way in which we think about them*.

Extensible Thinking and Improved Generalizing Skills

To follow associations, extensible thoughts, and the lines of inquiry in this book, it helps to use a "matrix-based thinking" process.

In one of my earlier books, The *Millennial's Missing Manual*, I proposed there are seven major physical "systems in life" that may be thought of as a cube which reduces to a matrix.

When thinking about everyday topics, I suggest Food (and water, of course), along with Shelter, Communication, Energy, Transportation, Environment, and Finance are the major matrix units. If you have enough of each, you have a good life.

A more comprehensive explanation is in Appendix 1.

Each of these represents a *critical system* needed to support physical life. Because Earth is a closed system (sunlight and meteor strikes aside), each of these *physical systems* interacts with all the others. Take any one of them away, and your lifestyle collapses.

That is a *simplified* version of the Matrix process I developed out of necessity (and frustration). As a journalist, it was a "short-hand" method to deeply understand a wide-range of stories about our shared physical domains/spaces. To report well, I needed to *understand well*… Quickly. Instant learning happens here. Instant writing follows.

Useful as it is, this is not the *only* possible matrix. There are others.

Abraham Maslow's *Hierarchy of Needs*[6] is similar, but oriented toward his specialty, human relations.

The goal of this book is to present a sweeping yet systematic approach to exploring - and then engineering - some fundamental questions in Life.

"What happens when we die?"

"Is there a "soul?"

"Where do souls go?"

"Can we engineer travel to there?"

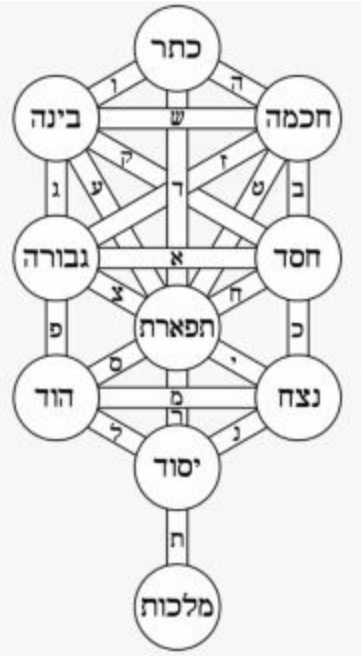
The questions are limitless. *Woo-woo* and even UFO's figure into our research, along with the Bermuda Triangle plus events like the Philadelphia Experiment and the Montauk Project. On the more practical side: Out of Body Experiences (OBE's), demonic possessions, and, oh yeah, quantum physics and why CERN is a time-waster, too.

As we go smashing through previously-tilled fields with fresh eyes, please keep an open mind as to how all these topics MIGHT "fit together" when viewed as a larger Matrix of Life.

At the Crater of Diamonds State Park in Arkansas, tractors still turn over soil that has been searched by previous tourists seeking "the Big One." When they don't find the elusive gem quickly, they give up. It's what most humans do; we are stimulus-response critters to the core. But then, at Crater of Diamonds, the rains come, a season or two passes, and suddenly a headline appears: *Another Whopper Gem Found!* Suck is the magic of a kimberlite pipe[7].

This book is a "first pass" through the muck of life's "data fields." Others have tilled it before; some with success, others not so much. What *is* unique here is a broad *interdisciplinary* approach.

Besides modern physics journals, a dusty old Bible, and sizeable library, we respectfully mention the Jewish Kabbalah as another *system of "correspondences"* that is graphically represented as:



While extremely useful, Kabbalah does not directly speak to science in the shorthand way this book does. Yet it is another *matrix view*.

I promise few formulas (and no friction coefficients!) but you will learn a different way to think, collect, and analyze facts and assertions surrounding a great many mysteries.

You might liken this journey to an episode of the TV show *Crime Scene Investigations* (CSI). How so? Buckle up and call the undertaker. Because first…

Part 1: Sifting Through Data

1. It Helps to Die

[**High-level:** We're all going to die. When that happens, religions tell us about *Dimensions Next Door*. And, after visiting the doors to such places, it's hard to argue with their apparently reality. A reality shared by millions…]

Until I was 28-years old, I had managed to banish my childhood Near-Death Experiences (NDE's) from conscious states.

However, in 1977 I met and interviewed Dr. Raymond Moody who had then just recently published his ground-breaking book "*Life-After-Life*." In it, Dr. Moody recounted hundreds of cases that exemplified a growing body of "*Afterlife experience*" that had begun pouring into modern medical research from an unexpected quarter.

Seattle, where I was news director of KOL and later KMPS, was home to the world-famous Medic-One program. Without going into details, it occurred to the Fire Service in the 1960's that fire stations – particularly in the industrial areas of major cities – could do a lot to reduce the horrible cost of industrial accidents by training deeply in first aid.

My family, mostly fire fighters, was deeply involved. My dad had gained his "Industrial First Aid" certification and my late uncle, John Philbin, was the Assistant Chief of the Seattle Fire Department when the Medic-One program was rolled out. Today, such emergency medical programs are commonplace, but in 1977, they were breaking news. The first medic unit was built at Todd Shipyards.

Of special interest to scientists, like Dr. Moody, was that some of the human "saves" brought "back from the dead" by the emergency medical personnel were bringing with them credible stories of what happened to them *while they were dead*. Not all, but statistically valid numbers remembered a common *process*. Dying reports from those who had *been there* had lots of

similarities.

That process – as Dr Moody described it during our interview, involved – for many people – a humming sound in the ears at first. Then, a very deep and often *profound* feeling of *peace* followed. After a time (though in some cases immediately), a shaft of bluish-white light appeared. As it did so, the spirit of a person, disembodied by the "death experience" was *drawn to the Light.* After a trip through a portal (or tunnel-like passage) lined with bluish-white light and more humming, many reported entering a *Realm of Total Peace and Love*. It was, *like Heaven*.

At least *most* of the time.

Some people brought back the *Hell* experience.

The "hell reports" were reminiscent of the paintings by the masters: Hades, an afterlife of continuous torment and Eternal Damnation. Once seen, however briefly, people having this experience were usually profoundly changed.

For the better. They went through huge personality shifts. In many cases they became "good" people; warmer, more loving, and other-directed.

Regardless of what path they were previously on, a significant number of the "medical saves" - *people brought back from death* – retained some *memory* of the experience. Even now, research continues into the afterlife transition event.

Living in peace and harmony grew in importance to survivors of dead, as did keeping "their space pure" and existing in a deep state of harmony with the world. It seemed that having "touched the Afterlife" the present world we share is unnecessarily uncomfortable, cold, and un-loving. Interest in "things" declined while the importance of "Love" increased dramatically.

Is our current life a kind of "school for souls?" If this is the case, as these experiences suggest, we haven't been very good students.

Returnees are more loving and "other-directed" in their outlooks. They forgive themselves and others readily. Many become living examples of *peaceful harmony and love* in this plane of existence. Their exemplary lives move forward in a quiet, solid, non-egotistical way. They are great people.

The kind you’d be proud to have as friends.

Been There, Dead That

I can't remember the first time I *nearly died*. There were so many times.

From childhood, I've been cursed with eczema and severe asthma. My parents had to bundle me up and took me to an emergency room several times, blue from the lack of oxygen from severe asthma attacks. Toss in recurring staph infections (and fevers) and allergies to favorite foods…not fun!

The asthma attacks were often accompanied by flu-like symptoms, high-temperatures in the 104°F range (and up).

Whether it was a body-temperature induced delusional state, or whether it was the "real-deal" is not clear to me, even now. Though certain aspects of Dr. Moody's work were terribly *familiar* to me when I interviewed him; call it a resonance. Others have cited Moody's work as having the "*Ring of Truth*."

The arrival of a typical near-death experience (in my case) was a *vision change*.

What moments before was the regular, plastered ceiling of my parent's home in Seattle would become *gooey*. Melt? Not exactly. There is not a proper word in the human vocabulary for the *shift*. Words like *syrupy* come to mind, but there's an extremely visceral part – a visual merger with the tactile, if that makes sense – as if the eyes had become organs of *touch*. Vision could suddenly touch. It revealed *a reality* that was plastic, molten, flowing, syrupy, sticky, with a foam-rubbery-like *touch* that is visceral. Sometimes with an ozone-like scent, like my old *Puratron* air filter and ozonator.

Was it simple kinesthesia? Proprioception[8]? No, it was far too visceral, at least in memory. Much too real.

Even today, I can go to that place when I relax and drop into a meditative state. I don't like it, though. Almost like an inner voice is saying "*It's not yet "right" to visit there. There will be time to experience that other-land on the way out. When that happens, just move through it to the light,*"

Well, ain't that great?

I've come to believe this is the "space" where shamans (and people on drugs, or those on deep religious quests dancing with a great Spirit) go spirit-adventuring.

There are less dangerous ways to get a taste of other ways of being. I discovered it while laying on my back on floor of the living room at my parent's home. Age 13, or so.

The fireplace was still putting out a bit of heat from an earlier fire. The log snapping long-stopped; only deep red coals remained. The house was quiet, and the chandelier on the ceiling held my attention.

For an instant, I felt like I was no longer "attached" to the body lying on the floor. Instead, I told myself: "*The ceiling is really the floor – and the world is really built upside down. It is only because we agree to be "on this ground" that we remain here and cannot fly*."

Later in life, after several eye surgeries, I discovered that we do, in fact, see the world "upside down" because of the optics of the eyes. A great "crossover" effect teaches us that things around us are "right-side up." It's social conditioning at its finest.

My parents were members of St. John's Danish Lutheran Church on Phinney Avenue in Seattle. Until his passing, the minister of the church, Dr. Kjaer (Danish, eh?), would present sermons that appealed to the always-practical Danes.

From one, I remember the idea "*When the Above is as the Below, you have Entered the Kingdom*."

Could it really be *that* easy?

I continued to work on "ceiling practice" once a week, for a year or two. Then I tried to extend it. I'd use this technique while walking to, or from, school. Our junior high school was a 1.5 mile hike each way and later the walk to high school was about 2½-miles.

To make the walking more interesting, I would flip-flop my experiential perspective. I'd begin in the "normal perspective mode" because that was easy. Consciously, *I was walking toward* some distant object. A brick house up the street a few blocks, or a gas station sign several blocks on would do

fine.

The awareness trick to change thought modes was to say, “I am walking [the object] to me.”

The *difference in perception changed the apparent effort required*.

I’m not sure how it works, but it revealed a source of *unlimited* energy because it helps to break you out of the “*physicality trap*.” Mentally tired becomes a banished state. Only the body slows. Separating mind from body is very interesting territory! This is the root of “*mental toughness*.”

The process may involve what Carlos Castaneda referred to as “*the assemblage point*”, although mine didn’t seem to be located behind my left shoulder, as Castaneda’s *Don Juan* explained in his encounters.

With one mindset shift, I could *leave the place* of illusions and start to “roll my own.” This happened the instant I convinced myself that *the place I was walking toward was instead coming to me*. Not the other way around. I was *moving the world simulation* – the data inputs - not my body.

Coupled with continuing practice looking up (and understanding at a deep level that it was down*)*, my views of everything became more flexible. I didn’t have much quarrel with anyone, since I understood at a spiritual level that not everyone is “*assemblage point agile*.”

Talk about some of this stuff to people who haven’t “been there” and they look at you like you should be in a rubber room, somewhere. While LSD users and others tinkering with self-medication seem to have pieces, most often their reports of experiences in “*The Place Between*”, come out fragmented, disjointed, and colored by their own experiences.

Years later, I went looking for the source of the late Dr. Kjaer’s sermon where the “*as above, so below*” was mentioned.

I found it in the Gospel of Thomas; a collection of 114 “sayings of Jesus” written in 340 A.D. Importantly, Thomas was not included in the New Testament. The Second Council of Nicaea[9] (786 A.D.) had seen to that.

Even earlier though, the First Council of Nicaea had met in 321 A.D.[10] and apparently this is where religion went-off on its power-trip. Group-think

tossed out key lessons. Near as I could figure, Thomas and Enoch were useful and important. But not in the wagon ruts the early Church was digging.

Notwithstanding, up went the toll booths. Here comes the tithe – a 1/10th part of all income – to pay for the Church; an enterprise a cynic might label a "racket."

Of course, this is not to say Churches don't do good or offer *some* useful teaching. Indeed, they do. And there are "*hidden realms*" of spirit, touchable in dreams, fevers, possessions, meditative states, and near-death experiences. Once you encounter the personal *reality* of them, there's no question about *believing* in *something* bigger than poor homo sapiens! Experiential knowledge.

But, there is far more to be learned than has been let out by Churches. Were it not so, the Vatican would not maintain its immense secret library.

And how big is the Secret Library[11]? How *secret*?

> "The Vatican Secret Archives have been estimated to contain 85 kilometers (53 mi) of shelving, and there are 35,000 volumes in the selective catalogue alone." Indexes must be consulted in the Index Room and replaced in their original location. Publication of the indexes, in part or in whole, is forbidden." The Archives support their own photographic and conservation studios."

One can speculate all day long as to what's in the *truly hidden* portions of the archives. Are there answers to space-time mysteries? Are there really ways to conjure "demons?" Can we "cross over alive and return?" We will never know for sure. Moody's work was the definitive start toward a non-Church answer. His findings were *transcultural*. Something is "wired" into each of us.

What we *do* know is that outside of the Vatican, there are serious hints and inferences. Which circles us back to (22) Thomas.

While some people take this as the "*as above, so below*" source, that's not specifically the case. Instead of cheerful, as I noted in a recent *Peoplenomics*[12] subscriber report, (22) Thomas may be read as downright

apocalyptic in nature. Because "*entering the Kingdom*" is in the Thomas context, *what happens at the End of Time*.

The happy-talk version of the "*as above, so below*" thought-virus (meme) is derived from contexting, not quoting:

> "22 Jesus saw some babies nursing.
>
> 2He said to his disciples, "These nursing babies are like those who enter the (Father's) domain."
>
> 3They said to him, "Then shall we enter the (Father's) domain as babies?"
>
> 4 Jesus said to them, "When you make the two into one, and when you make the inner like the outer and the outer like the inner, and the upper like the lower,
>
> 5 and when you make male and female into a single one, so that the male will not be male nor the female be female,
>
> 6when you make eyes in place of an eye, a hand in place of a hand, a foot in place of a foot, an image in place of an image,
>
> 7then you will enter [the (Father's) domain]." [13]

Since (22) Thomas 5 and 6 relate to things that could be readily interpreted as *recent technological, medical, and social events*, the immediate question is whether "*entering the Kingdom*" may be at hand, although who knows when. Still, a more pressing question is "*Are we in the approach to End Times*[14]?"

Back to our manipulated reality discussion, though: Although it had seemed useful for a time – the practice of *drawing things towards me* was an interesting distraction *while working toward things*, at the end of the day my feet were still sore.

My childhood adventures on the outskirts of the Realm of Spirit and *woo-woo* seemed to be coming to an unproductive end.

Until my world changed again. This time it was the fall of 1966…

2. Encounter with a Long-Delayed Echo (LDE)

[**High-level:** A chance encounter with a rare radio phenomena opened my eyes to the possibility that there may be "dimensions" where *normal* physics rules – like the Inverse Square Law, don't necessarily apply.]

In the late fall of 1966, there was still some activity on the 20-meter (amateur) ham radio band when I began to "call CQ" – meaning I was looking for another station (any station, anywhere) - to talk to for a while.

The antenna I was using was a simple multi-band dipole set up as an inverted-vee; still popular even now. The feed point at the top of the vee was 40-feet up on the west side of Beacon Hill in Seattle. A friend 'back in the ham day' – Terry - had helped me walk a 40-foot section of irrigation pipe from nearly the north King County line through downtown Seattle to Beacon Hill on a quiet Sunday morning.

The antenna itself, draped from the top of this pipe, was about 60-feet either side of the center. To make the antenna operate on more than two bands, it had W2AU antenna "traps" installed. It wasn't the best antenna ever, but it was pretty good. I had talked (or contacted via Morse code) to around 40 countries at that point.

The receiver I was using was a National NC-300 that had been lightly modified. I paid special attention to getting the receiver's "front-end" to operate perfectly by making minor adjustments to the vacuum tube bias settings in the radio frequency (RF) amplifier stage. This, coupled with some changes to the automatic gain control (AGC) had made it an especially "hot" receiver.

The transmitter was a Johnson *Pacemaker*. It was a phasing-type SSB exciter which sounded very good compared to the narrower filter-type exciters that were more commonly used after the late Lew McCoy began preaching the virtues of narrow crystal filters for SSB generation. The *Pacemaker* input was 90-watts.

I remember looking out of the window from my basement ham shack at the sky. The window looked east and up a very steep hill, so not much of the sky

was visible. But it was partly cloudy with a moderately thin overcast. Bright, cloudy and scalloped looking.

The experience that followed was so intense that I wrote it up in 2013 on the UrbanSurvival.com website:[15]

"Sometime in the past week, or three (time blurs when laboring hours on the new website), I promised to tell you about my personal encounter with an LDE or *long delayed echo*. The reason is that this is very special territory for the inquiring minds who want to know and it is very well-established by real science as being a replicable phenomenon.

So, what, exactly, is a "long delayed echo?" A clip from Wikipedia in the interest of being concise because I could go on for hours about it:

> **"Long delayed echoes** (**LDEs**) are radio echoes which return to the sender several seconds after a radio transmission has occurred. Delays of longer than 2.7 seconds are considered LDEs.[1][2] LDEs have a number of proposed scientific origins.
>
> These echoes were first observed in 1927 by civil engineer Jørgen Hals from his home near Oslo, Norway. Hals had repeatedly observed an unexpected second radio echo with a significant time delay after the primary radio echo ended. Unable to account for this strange phenomenon, he wrote a letter to Norwegian physicist Carl Størmer, explaining the event:
>
> At the end of the summer of 1927 I repeatedly heard signals from the Dutch short-wave transmitting station PCJJ at Eindhoven. At the same time as I heard these I also heard echoes. I heard the usual echo which goes around the Earth with an interval of about 1/7 of a second as well as a weaker echo about three seconds after the principal echo had gone. When the principal signal was especially strong, I suppose the amplitude for the last echo three seconds later, lay between 1/10 and 1/20 of the principal signal in strength. From where this echo comes I cannot say for the present, I can only confirm that I really heard it.[3]
>
> Physicist Balthasar van der Pol[4] helped Hals and Størmer investigate the echoes, but due to the sporadic nature of the echo events and variations in time-delay, did not find a suitable explanation.[5]

Long delayed echoes have been heard sporadically from the first observations in 1927 and up to our time.

I placed the time about 10:00 to 11:30 AM because that was when the sun came in…. our house was on a hill so the basement window only got about 2-hours of sun at best.

I was calling "CQ 20, CQ 20" - radio-ese for "Looking for someone to talk to…

As I un-keyed the mic to listen for a returning station, you can imagine my shock when I heard….ME! Except it was me delayed by 3.4 seconds, calculated from saying my then call sign and measuring the portion I'd heard on a digital sound rig much later in life.

Significantly, the signal was dead-to-nuts on frequency and it was S-9 to 20 dB over S-9 so it was stronger than heck against a very low noise level (S-2 to S-3).

I didn't learn about LDE's until after I had earned my First-Class Commercial ticket not long after, so thinking back on the issue date of that (December '66), I reckon this took place in the fall when I was a high school senior and was a nerd's nerd in things electronic.

For the period right after the event, I was convinced it was someone simply recording my signal and playing it back with a tape recorder. But when I heard a good chunk of myself asking "…are you playing with me?" come back, I realized that there was almost no chance that someone could record and retransmit my signal that quickly for technical timing reasons that would bore you to tears.

Yes, that was an encounter with a long-delayed echo. Mentally, the effect would be as if you'd got to a mountain valley, yelled something, not been waiting for an echo, and then hearing *just a single echo*….no later ones fading off into the distance. One, clean, unambiguous *you*. And just to compare the delay, in sound it would be like yelling and hearing that one return of your own voice something like 10-minutes later…which I think you'd agree, would be a stumper indeed because, damn it, physics isn't supposed to work that way.

Unfortunately, there are at least five competing theories about what causes a long-delayed echo – and remember as you think about these that radio waves move around at a pretty good clip: 186,000 miles per second, plus or minus a speeding ticket.

1. The most often use explanation is that “ducted propagation” is involved. This is one that I have never bought into because the phenomenon is noted from the lower reaches of the shortwave bands up through 1.250 gigahertz and may exist higher.

Also, because the delay times often run in the 4-5 seconds (My encounter with them was about 3.4 seconds). The math on this becomes impressive: At 4-seconds, a radio wave would have to travel 744,000 miles and return to the original sending station. If we assume a low ducting path, that would mean a radio signal would have to go around the Earth 12-13 times. Then land smack at my Beacon Hill antenna with minimal attenuation in strength.

A statistical impossibility.

Even on a good day, trans-equatorial ducting doesn’t do that well. (If you don’t know what TE/ducting subset of trans-equatorial propagation, in general is, a ham radio easy to follow discussion is here or if you’re a retentive EE type, try this link on for size.)

2. “Normal” propagation is sometimes cited, but there are two reasons not to buy this idea. For one, radio waves are subject to inverse-square law declines of signal strength. So that - in my case - doesn’t fit. Totally insufficient signal attenuation under inverse square. And in the second case, the phenomena are noticed well up into the UHF range and this means that the signals can’t be going around the world since above the maximum usable frequency (MUF) the radio waves should head off into space due to declining reflectivity of the F2 layer. Bounces go kaput above the MUF. The MUF comes down at night which is why you can hear far away AM radio, yada, yada…

3. Signals *coupled to plasma* in the upper atmosphere may sound appealing, but what are the odds that a) conversion would not be noted as such a wide range of frequencies and b) why would such signals decide to arbitrarily come back to their starting point with almost no reduction is strength after as

much as 12-15 seconds? This one makes no sense to me.

4. Reflection from *distant* plasma clouds? Well, nice, but no cigar here, either. Remember the signal I heard? It was not a low-strength signal bounce. This was S-9 to 20-over. No way in hell could a plasma cloud provide that signal strength given the inverse-square law *as we know it*.

5. Last, but not least is the non-linearity plus mode conversion plasma coupling model. Except that there would be presumably some frequency shift or at least phasing sound and no, in my case it was just good, clear, clean SSB and it sounded identical to what I was hearing on the receiver in my ham shack as I always monitored my transmit signal.

So, what else might explain what's going on? This gets a little complicated but the ARXIV.org website contains this fascinating paper circa 2010 under the heading:

Geometrical joke(r?)s for SETI.
R. T. Faizullin
OmSTU, Omsk, Russia at
http://arxiv.org/ftp/arxiv/papers/1007/1007.4054.pdf

Fazullin's paper is an awesome attack on the fundament mystery of the LDE phenomena and one of the possibilities that he gets to (if you suffer through the introductory 36-pages of serious math) comes down to the possibility of radio beacon of some kind on the *moon!*

"Note, that point number 8 (in his paper) corresponds to the Crater Aristillus, the first well-known Greek astronomer, who wrote his work 'About fixed stars" even before Hipparchus. So, we finally came back to stars again. If it really is a message, then it's done elegantly! Also, pay attention to the fact that this crater is only one degree shifted from the primary meridian (on the aim), so the location of the artefact may be either inside the crater or on the line of intersection of the primary meridian and the crater. This limits the area of search to several hundred square meters."

All of which is admittedly a very long discussion of the Long-Delayed Echo phenomenon, and Fazullin's heavy math. But it gets us to a very interesting bit of speculation that Arthur C. Clarke may have either been quite prescient or privileged to extraordinary knowledge when he wrote a "science fiction"

books called “The Sentinel” which would later be turned into the movie “2001: A space Odyssey.” As Wikipedia sums up the plot line:

The story deals with the discovery of an artifact on Earth’s Moon left behind eons ago by ancient aliens. The object is made of a polished mineral, is tetrahedral in shape, and is surrounded by a spherical force-field. The narrator speculates at one point that the mysterious aliens who left this structure on the Moon may have used mechanisms belonging “to a technology that lies beyond our horizons, perhaps to the technology of para-physical forces.”

The narrator speculates that for millions of years (evidenced by dust buildup around its force-field), the artifact has been transmitting signals into deep space, but it ceases to transmit when, sometime later, it is destroyed “with the savage might of atomic power”. The narrator hypothesizes that this “sentinel” was left on the moon as a “warning beacon” for possible intelligent and spacefaring species that might develop on Earth.

In *2001: A Space Odyssey*, the operation of the sentinel is reversed. It is the energy of the sun, falling for the first time on the uncovered artifact, that triggers the signal that creatures from the Earth had taken the first step into space.

Which leaves us with a ponder and a task.

The task first: If you’re a ham radio operator, try pointing your beam on the various HF bands at the rising moon for a half hour on each of the HF bands where you have a good antenna and even if the band is otherwise dead. Call “CQ” and listen for LDEs from the moon. If Fazullin is right, you MIGHT hear some.

Which leaves us with two ponders: The first is about Clarke: Was he aware of this phenomenon and was it moon-related?

And further, did someone (entity) leave a transponder up there and is *that* why the nations of Earth haven’t been particularly interested in going back to the moon? Is it off-limits?

Seems the PowersThatBe have a pretty good gig going…so much so, that much might be explained by a slow disclosure path controlled by those in powerful places.

You might want to watch *2001* again…Fazullin may be right!

3. Quantum… Sense and Nonsense

[**High-level:** OK, there are *spiritual dimensions*, and arguably *odd plasma behaviors*. But won't "Science" be able to resolve all these things? Don't hold your breath. *Science* adores stability and walks largely in the same tracks…]

The next groundwork we need to lay involves "social hysteresis."

Social what?

"hys·ter·e·sis pronounced *his-**TERR**-iss-iss* (or alternatively hissed-eh-**REE**-sus)

Noun: hysteresis

1. The phenomenon in which the value of a physical property lags behind changes in the effect causing it, as for instance when magnetic induction lags behind the magnetizing force.

Let's go extensible for a moment.

In early civilizations, people had their *gods and goddesses*. They co- evolved with government. The more people, the larger the government. The more people, the more the religion.

In most cultures, the two subjects – government and religion - became intertwined. It is no accident of history, at least to me, that the stories of Moses and the Ark of the Covenant were handed down from a wandering tribal people.

Get some tribe, have them living "close to the Earth" and you'll see spontaneously arising stories of the Spirit Realms.

The Native American might be more inclined to remain within tribal norms if a shaman delivered the word that "Great Spirit" wanted something. In Greece, the various entities of the spiritual Realms had names and temples. Offerings were made to the gods and to government, rendering unto Caesar[16] …. (Matthew 22: 15-22)

Modern-day Islam is a working blend of religion and governance (a theocracy). In the United States, we were once "*One Nation under God*" but that phrase is quickly being destroyed on the pretext of "political correctness." Curiously, the former Soviet Union has taken up a more "*under God*" cloak than the U.S. enjoyed prior to President Trump.

Shortly after communism fell, only about 30% of Russians identified as Russian Orthodox; but by 2008, Pew Research[17] reported 72% identified themselves as Russian Orthodox. Almost laughably, the Russians are returning to their religion (Russian Orthodox) at a record pace while America carries out her "Great Turning-Away.[18]"

Are We Talking God or Physics?

That's all on one side of the great hysteresis change equation: For the other, we observe that although quantum mechanics has become more widely-known and accepted, the adherents among religionists are vehement objectioning to the rejoining of the two (scientific and religious) paths to the *ultimate spiritual ground*.

In other words, what a military strategist would call an LIC[19] (low-intensity conflict) continues to rage between Science versus Religion with about equal numbers of True Believers on both sides. San Francisco longshoreman Eric Hoffer explained the mindset quite elegantly *in The True Believer: Thoughts on the Nature of Mass Movements*[20]. Yet despite their obviousness, mass movements continue to market their divisive wares. The public, being stupid, continues to follow and fund both sides of the argument and conflict. Talk about waste!

For the small portion of humans not so dense, two principal aspects of quantum mechanics related to our research are important: *Superposition*[21] and the *Many-Worlds Interpretation*[22] of quantum physics.

Superposition is important because it provides that as we go seeking the Truth, we should be able to find it whether it is "in a Church" or whether it's "in the Lab."

The famous "double-slit" experiment proves superposition.

In an experiment, a single light source is directed toward two slits through which light may pass. There are two possible outcomes of the experiment.

In one instance, photons of light will act as though they are *waves* and, around the edges of the material behind the two slits, *interference patterns* will be seen. Details of Moiré patterns are easily found.[23]

On the other hand, seemingly based on *Observer Expectations*[24], the light may instead leave a pattern that indicates *particles* are in play, not *waves*.

This was all provided-for in the Schrödinger's cat experiment.[25] In 1935, Erwin Schrödinger envisioned a cat, sealed in a box, with perfectly equal 50-50 odds – of being alive when the box was opened. The opening would reveal either a) the cat was dead OR b) the cat was alive. Thus, the

Copenhagen Interpretation introduced (and provided) that *expectations create a future outcome*.

That should have been *IT* – the end, *finis* – of any division between religion and science. Because religion had been preaching prayer works (expectations, right?) for a couple of thousand years, this was common ground at last.

Yet here it was, Western Reductionism[26] had experimented like crazy, only to reach the same conclusion. *What you expect* – at some deeply fundamental level – is *what you get*. Read on Lynne McTaggart's Peace Intention Experiment[27].

While this has been known for a long time, it hasn't deterred the "bigger hammer" school of physics. In this book, we're taking a different track. Rather than challenge the way Reality condenses, we will study anomalous *effects*. To attempt to cheat the *Observer State* is probably futile.

Reductionism is its own worst enemy.

Over time, Western science, once ridiculed by Native Americans, has begun collapsing in a heap of excessive specialization. Science has become incapable of seeing its own folly. To keep up the illusion? Sacrifices must be made.

"*White man crazy. Look at watch to see if he's hungry…*" a Native America is stereotypically quoted as saying.

Other observations about Western Reductionism, attributed to Native Americans remain precisely on point, revealing the laughably-large holes in Western logical processes.

Speaking of Daylight Time, it was said "*White man cuts off one foot of blanket and sews it on the bottom. He then convinces himself he has a longer blanket*."

Whether these were spoken by Native Americans may be racial stereotyping, but there is a *ring of Truth* to the skepticism expressed toward Reductionism. As the Chief Seattle quote in the front piece of this book points, nowhere is Western delusion clearer than in economics:

> “*Only when the last tree has died and the last river has been poisoned and the last fish has been caught will we realize that we cannot eat money.”*
>
> *-Chief Seattle, Suquamish and Duwamish Chief (1786 – 1866)*

Try to remember this when the cheap oil runs out in our lifetimes. It’s a reason to “cowboy up” and get out of ‘*them thinkin’ ruts*’ sooner than later.

Trouble in Mindset

The Reductionist mindset has proven a difficult mountain for Truth Seekers to scale.

The problem gets worse because many issues facing humankind have been solved by "*going big*" or by "*going small.*" Mega-cities and microelectronics are the modern norm. As a result, here comes social hypnosis and back we go "into the same wagon ruts" laid down by previous generations of thinkers.

Current activities in particle physics research amplify the point.

The species figured out (prior to World War II) that atoms could be split a couple of different ways: Refining enough material and then piling up a *critical mass* was one. Critical mass is a simplified way of saying "Put enough particle generators close together and a chain reaction results."

"Atom smashing" is very much like discovering a small hammer. At first, it was a flash as atoms were smashed during the Manhattan Project's run in Chicago. The next bigger hammer was unleashed at Trinity Test Site in New Mexico in 1945, and thereafter over two cities in Japan.

Was the hammer big enough? No.

In 1962, a 1.44 megaton thermonuclear W49 "hammer" exploded in the upper atmosphere (400 km) and 900 miles west-southwest of Hawaii. It blew out street lights in Honolulu[28] and the age of mega-death and EMP devices was upon us.

When you get a hammer for the first time as a child, your inclination is to go around and hit things with it. It's what humans have done since rocks.

Scaling up, we hit first hit on fission reactions (splitting attoms) and then into fusion (fusing reactions), Along the way, we figured out enhanced yield atomic devices, though (the biggest hammer of all), were thermonuclear fusion devices.

Can we build a bomb without the "dirty" fission core? Lasers to start fusion? In time, no doubt. It is, after all, just a "bigger hammer" engineering issue.

If you're smart, however, you'll sense something missing.

The study of *interactions.*

Sure, we learned about fallout, of course, and about half-lives of the various radionuclides, and a lot more. But in many ways, pushing physics along has continued as the quest for the *Biggest Damn Hammer* there can be.

This is precisely what the massive CERN project seems: While admittedly, they have claimed discovery of the Higgs Boson (God Particle), they have also left a good-sized pile of "used hammers"[29] in their wake:

- The original linear accelerator (LINAC 1).
- The 600 MeV Synchrocyclotron (SC) which started operation in 1957 and was shut down in 1991.
- The Intersecting Storage Rings (ISR), an early collider built from 1966 to 1971 and operated until 1984.
- The Large Electron–Positron Collider (LEP), which operated from 1989 to 2000 and was the largest machine of its kind, housed in a 27 km-long circular tunnel which now houses the Large Hadron Collider.
- The Low Energy Antiproton Ring (LEAR), commissioned in 1982, which assembled the first pieces of true antimatter, in 1995, consisting of nine atoms of antihydrogen. It was closed in 1996, and superseded by the Antiproton Decelerator.

Need an outdated hammer? Plenty of them around, too. Check Hanford, Washington, and Oak Ridge, Tennessee, if you need still more. Lop Nur[30] in China has a number, as well – it's the price of entering the Big Hammer Competition.

What's going on, seems to me, is an expression of a flawed mindset that has afflicted science for all time.

Having identified the God Particle, we have seen exactly zero useful social results from its discovery-- the quest goes on. Why?

Is it possible we're not asking *the right* questions?

Peter Drucker's management approach (*Managing by Objectives*[31]) offers good insight. In business, those of us brought up on Drucker were taught that '*management's job is to manage and that means keeping your eye on the ball*

(objective).'

What is the point of CERN?

To be sure, there have been a few spin-offs in supercomputing. But was that on the agenda and worth the billions?

I'm not the first to raise this "God Particle" question.

In 1993, former *Fermi Lab* director Leon Lederman[32] was wondering the same thing. The result was his book *"The God Particle: If the Universe Is the Answer, What Is the Question?"*

A widely quoted snip from the book offers this:

> "This boson is so central to the state of physics today, so crucial to our final understanding of the structure of matter, yet so elusive, that I have given it a nickname: the God Particle. Why God Particle? Two reasons. One, the publisher wouldn't let us call it the Goddamn Particle, though that might be a more appropriate title, given its villainous nature and the expense it is causing. And two, there is a connection, of sorts, to another book, a *much* older one..."

Unfortunately, the Higgs Boson reminds us of the story of a dog running after a car driving down the street.

Out comes the dog's owner and calls him off. *"There, there, boy: What would you do if you caught it?"* Now you're in the boat with particle physics…

That's where the Higgs Boson is: CERNese-types think they've seen it… running down the street. But, so what?

One of the biggest problems in science (as well and any discovery pursuit) is to remain steadfastly asking "What are we trying to accomplish? Is there some way to reduce all this *theory* to the *practicum* and make a buck or a benefit out of it?"

The problem is not unlike early adventures in electricity.

You may not have processed this, but follow along here: It's a lesson in wagon ruts. The Leyden Jar[33] was invented in 1745 by two inventors in Germany. Ewald Georg von Kleist and separately by Pieter van

Musschenbroek.

But now, check out the arrival of the *useful application* of electricity to a real-life problem. Allesandro Volta[34] introduced *a glowing wire* in 1800, but that was *half a century* after the Leyden Jar!

Moreover, it wasn't until 1878 – fully 133-years later than Leyden– that Thomas Edison got onto the idea of making (and commercializing) the long-lasting incandescent light which set the groundwork for 24/7 work.

Keywords: Hysteresis, ruts.

This is not to claim that CERN is a *bust*. What it does point out is that even when the rudimentary tools necessary to commercialize an application of electricity to the point of mass adoption can take 133-years, expecting an immediate payoff from CERN is foolish. Given the long-term pay-off prospects, is CERN the best possible use of public resources? Do we have more pressing engineering to do?

That's before we get into how many "billion-dollar hammer collections" were available to small-town inventors like Edison (Menlow Park, New Jersey) or the Wright Brothers (Dayton, Ohio). Sometimes **small questions beget big answers**.

Popular physics has done a masterful job of marketing the idea that a quantum breakthrough will be a *device*. But historical data, as we shall see, demonstrates huge effects with something as simple as a *musical instrument*.

Eureka? No.

Jericho? Yes.

4. Dimensions of the Wavefront

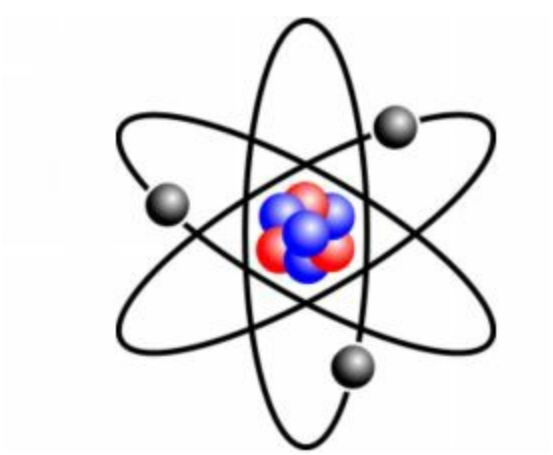
[**High-level:** With *spiritual* and possible *plasma* effects real enough, and with dim hopes of *Science* providing a massive break-through today, let's look at some really *interesting* discoveries wrought from unconventional thinking…]

OK, physics has laid out the "*mystery room*" for us: We live on a planet, we have electricity, we've built some fine big hammers to smash on things like atoms and maybe squeeze a "God Particle" out for a quick snapshot now and then.

But what do we *think* we know about the underlying reality of physical existence?

For one thing, we know it is HUGE. But we fail to communicate that very well.

Consider an atom of lithium. Four neutrons and three protons at its core and three electrons circling around it:



All of which is usefully represented here, but in a very *misleading way*. For the "cloud of electrons" are circling the core of the atom at distances that *may* vary based on *observer expectations*. Oh great…*reality* is an expectation-driven apparition.

More importantly: The size relationship of the drawing above is totally wrong. The facts suggest that if the proton/neutron nucleus were scaled to

the size of a golf ball, the electron cloud would be on the order of one meter (3.25+ feet) out from the core.

This magnificent discovery, along with realizing the electrons are more cloud-like than specifically positional, prompted one writer (Burke) to remark "*We are all Phantoms*.[35]"

For our discussions, it's important to understand how these "clouds" of electrons circling nuclei interact with our world. Clouds don't interact easily. A given.

The "clouds" importantly in our discussion, have *resonant frequencies* that seem to be easily broken down under the right conditions.

Not many people know of a ham radio operator named John Kanzius. He became what those of us who are hams call a "silent key" (meaning he died) in 2009. However, Kanzius opened an incredible quantum insight into the true nature of Reality because of his breakthrough work while developing a cancer treatment.

Specifically, while applying radio-frequency energy to a test-tube of saltwater, Kanzius discovered that the water would separate off its hydrogen atoms. He demonstrated the effect using moderate power levels and a continuous wave (CW) source operating just below the 20-meter high-frequency ham radio spectrum.

Adding to the story, Wikipedia reveals that…[36]:

> "Later in 2007, Kanzius claimed that the same radio frequency transmitter can also be used to generate a hydrogen-oxygen mixture dissociated from saltwater. The discovery was made accidentally while he was researching the use of radio waves for desalination. Kanzius said that "In this case we weren't looking for energy, we were looking for something that might do desalination. The more we tried desalination, the more heat we produced, until we got fire".
>
> Kanzius' Invention has been publicized on multiple local TV stations as a source of cheap energy. In a column in the journal *Nature*, Philip Ball pointed out that since water is created by burning hydrogen, it cannot be used as a fuel by generating hydrogen from water and then burning

it. Such a process requires providing an equal or greater amount of energy output than is input. This observation is one of the foundation principles of the laws of thermodynamics. Kanzius acknowledged that this process could not be considered an energy source, as more energy is used to produce the RF signal than can be obtained from the burning gas and stated in July 2007 that he never claimed his discovery would replace oil, asserting only that his discovery was "thought provoking".

In 2007, Rustum Roy, a materials scientist at Pennsylvania State University, stated that "The salt water isn't burning per se, despite appearances. The radio frequencies act to weaken the bonds between the elements that make up salt water, releasing the hydrogen. Once ignited, the hydrogen will burn as long as it is exposed to the frequencies". The temperature and flame color vary with water solutions and concentrations.

However, in 2008, in an article Kanzius co-authored with Rustum Roy and Manju Lata Rao published in *Materials Research Innovations*, they concluded that "It has been confirmed that polarized RF frequency radiation at 13.56 MHz causes NaCl solutions in water, with concentrations from 1 to over 30%, to be measurably changed in structure, and to dissociate into hydrogen and oxygen near room temperature. The flame is a burning reaction, probably of an intimate mixture of hydrogen oxygen and the ambient air. Most of the Na present in the solution, concentrates progressively – as measured – as the water is dissociated and burned".

The 2008 article also stated that the products of this dissociation were markedly different from those produced by electrolysis. It states "The gaseous effluents are obviously different from those obtained from electrolysis as they are produced mixed in situ simultaneously. Hence, the burning of these effluent gases should not be compared precisely with the burning of molecular hydrogen in air or the molecular oxyhydrogen mixtures."

The critical takeaway from the Kanzius experiments is that applying a specific *frequency* and *specific power density* and *polarization* induces the spontaneous breaking of hydrogen bonds. What *else* acts oddly and what

have we missed?

Sure, the cancer-fighting implications, when coupled with nano-particle gold and other elements are remarkable. But to those with a sufficient appreciation of the *vibratory nature of Reality*, the Kanzius discovery stands head-and-shoulders above many lesser inventions. It looks to have Big Hammer potential.

Acoustical Levitation and UV Breakdown

The Kanzius discovery of the hydrogen bond vibration at 13.56 MHz represents only one data point in what comes into view as a *large spectrum* of effects that may be seen at ultra-low frequencies, such as the audio spectrum, and at extremely high frequencies such as high ultraviolet light.

This wide range of frequencies, which in the amateur radio community is laughably referred to as "*D.C.* (direct current) *to Daylight*," displays different effects that are *frequency and power-density* related.

One such effect is acoustical levitation.

In the literature, we read of Tibetan orders in the past that could move huge stones and place them with great precision into temples on otherwise inaccessible mountainside locations. We'll get deeply into this in a later chapter.

The way this was done involved monks sitting in a semi-circle and all blowing horns tuned to specific frequencies. According to tradition, this *moved incredible weight effortlessly*. If you don't count 13-drummers…but we'll get to them.

It is important to make a distinction here: In the literature on acoustic effects, such as the discussion of "Levitation of single solid or liquid samples Levitation of single solid or liquid samples in an ultrasonic single-axis standing-wave levitator.[37]" Single, confined *physical air columns*.

Although *Live Science*[38] headlined in 2013 that "Floating Free: New Levitation System Uses Sound Waves" we are seemingly stuck, for now, on the single air column for results. Similarly, when *Gizmodo* gushed about how "This $120 Anti-Gravity Machine Beats All Desk Toys to Date[39]" it was all thanks to *sound vibration in air*.

The point to be borne in mind is that *vibration in air* exhibits tangible physical effects foretold in ancient literature. Tibetan reports are of *multiple-source* levitation effects not so bounded.

Effects of vibration in the *electromagnetic spectrum*, while not as attractive as "hoverboards" and other legends of sci-fi, may some day yield important applications as the Kanzius' discovery could be only a starting-pointing on a

longer path.

Is there a “middle-ground” (between acoustical and pure electronic (E-M waves)? I was intrigued with reports of the Bedford Levitator: “*In this early configuration by Bedford, Peer, and Tonks from 1939, an aluminum plate is placed on two concentric cylindrical coils, and driven with an AC current. When the parameters are correct, the plate exhibits 6-axis stable levitation*. [1]”[40] No frequencies were disclosed.

Again, we are seeing a very slow, long-term branching out of new concepts from a few observed anomalous behaviors such as how aluminum acts in A.C. electric fields..

The good news is that work is pioneered using radio-frequency characteristics of materials for things such as quality control and defect identification. Here’s an example of current work being done by R. Hughes, Y. Fana, and S. Dixona of the Department of Physics, University of Warwick, UK and the School of Engineering, University of Warwick, UK.[41]

Abstract

An investigation was performed into the effects of operating an absolute eddy-current testing (ECT) probe at frequencies close to its electrical resonance. A previously undocumented defect signal enhancement phenomenon, resulting from associated shifts in electrical resonant frequency, was observed and characterized. Experimental validation was performed on three notch defects on a typical aerospace super alloy, Titanium 6Al–4V. A conventional absolute ECT probe was operated by sweeping through a frequency range about the electrical resonance of the system (1−5MHz). The phenomenon results in signal-to-noise ratio (SNR) peak enhancements by a factor of up to 3.7, at frequencies approaching resonance, compared to those measured at 1 MHz the defect signal enhancement peaks are shown to be a result of resonant frequency shifts of the system due to the presence of defects within the material. A simple, operational approach for raising the sensitivity of conventional industrial eddy-current testing is proposed, based on the principles of the observed *near electrical resonance signal enhancement* (NERSE) phenomenon. The simple procedural change of

> operating within the NERSE frequency band does not require complex probe design, data analysis or, necessarily, identical coils. Therefore, it is a valuable technique for improving sensitivity, which complements other ECT methods."

We shall return to this point as the central theme of this book emerges, but it's important to note that electrical resonances of physical materials seem to cover a wide band of frequencies. While specific near-resonances are useful in identifying defects in materials, multiple materials imply a wideband approach, like the design of spread spectrum modulation techniques.

Materials at Extremely High Frequencies

Water heats quickly when exposed to high power-density radio waves.

Ultra-High Frequency radio waves are known to cause heating in physical goods with moisture. This is the principle underlying the microwave oven. It is also why the Federal Communications Commission has published extensive regulations government MPE (maximum permissible exposure) levels for all radio transmitters of consequential power above 300 KHz.

Because the human body contains a lot of water (approximately 73%) exposure to VHF and UHF radio transmissions are of concern. There's little difference between the operating frequency of a microwave oven (2.45 GHz [Gigahertz[42]] and your home 802-11 type Wi-Fi router (2.4 GHz).

Anyone serious about reducing their health risks due to exposure to radio frequency energy should be mindful of this portion of the F.C.C.'s implementation guidance[43] on limiting human exposure levels:

> "In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions.3 The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993.4 The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz. Limits are also specified for localized ("partial body") absorption that are used primarily for evaluating exposure due to transmitting devices such as hand-held portable telephones. Implementation of the new guidelines for mobile and portable devices became effective August 7, 1996. For other applicants and licensees, a transition period was established before the new guidelines would apply.5
>
> The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) 6 and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines.7 Limits for localized

absorption are based on recommendations of both ANSI/IEEE and NCRP."

The heating effects, as well as the genetic mutation rates induced by radio frequency energy are non-trivial.

We should mention, in passing, that your cell phone *may* be causing damage to your health, as well, since it is a transmitter. According to the literature "There are two common frequency bands that all cell phone carriers use. The Cellular band commonly referred to as 1900 uses the frequencies 1850-1990 MHz. The other band is PCS which is the 800 MHz band uses frequencies in the 824-894 MHz range."[44]

5. Electric Beings on a Wavefront

[**High-level:** Since we live in an electromagnetic "soup" maybe we're *electric beings* living in some kind of a matrix. But are we? Electrons don't seem to weigh much, so how can *souls have weight* – or do they?]

We have covered a lot of territory, so let's pause for a moment and recap some of the wide-ranging ideas we've covered.

First, we are trying on a new way of thinking using a matrix approach to problems realizing that in a four-dimensional physical world (height, width, depth, and duration in time-space) everything may be "gridded."

Then, we examined some of the *Afterlife* aspects of being a human. People do physically die, but there is an "*approaching the afterlife*" experience that's common. Whether it is an artifact of the brain producing a huge burst of a chemical called DMT – the so-called spirit molecule (*N*, *N*-Dimethyltryptamine[45]) – as part of its *shutdown at death* processes, is not clear.

We skipped that discussion (*until now) because it is intimately tied with the Conservation of Energy problem.

This law of physics argues that energy may neither be *created nor destroyed*. It may change form and it's commonly understood that the most obvious example is the atomic bomb which releases huge amounts of *energy* transformed from *matter*.

A few of my personal experiences, perhaps in the borderland between death and life, were recounted. But the most important detail is not so much the experiences *per se* but the *gooey, syrupy* aspect of a different *Reality* in which the visual becomes tactile.

We then ventured into the gap between science and religion. Using our "gridded view" of Reality overall, it becomes apparent that the major distinction between Religion and Science is *who owns the tech* and *who's making the money*. Then whatever is left (in either case) is what distributed to "W*e the People*."

My experience with a Long-Delayed Echo in ham radio got us back on the track of electronics and vibrations.

In turn, we were led back to religion and from there into the collision between religion and science embodied as quantum mechanics.

After that, it was a discussion of how waves can "break things down" based on frequency and that brings us to where we are now.

Everything seems to have a resonant *frequency*. It's another battleground between the Religionists and the Scientists. *Auuummm* to Tesla[46].

Unlike religious chants, Science seek ready replication. No more of this humming, despite the well-documented benefits of transcendental meditation and its curious usefulness to both factions. Who would have imagined hums and chants as a paradigm battleground?

Science instead records the *frequencies* of everything: tides, orbits, air pressures, lifespans, disease outbreaks, water pollutants…everything that can be measured *is* being measured.

But above all, everything seems to have a *frequency*.

How Much Does a Soul Weigh?

This is not a trivial question.

Not so much that we can calculate the "weight" of a soul – because under Einstein and his $e=mc^2$ idea, the weight of a soul would be practically too small to measure. Let's face it, if a few pounds of plutonium can level a *city*, then the weight of the human "energy" allocated to their "soul" would be too small to measure in a meaningful way.

There may be no such soul energy if measured on Monday mornings!

True, the total *electrical output of the brain* is impressive. The *Physics Factbook* reports (we think reliably[47]) that "The brain consumes energy at 10 times the rate of the rest of the body per gram of tissue. The average power consumption of a typical adult is 100 Wattstqa and the brain consumes 20% of this making the power of the brain 20 W. Glucose is the main energy source for the brain."

When you think about a 20-watt computer (remember the *Vic20*?) that's not much horsepower. Today? The brain remains many times smarter than the smartest of tablets!

Even with a lot of efficiencies of the 20-watt brain, 90% (or more) is engaged in the baseline life-support operations of the human body. The body may be thought of as a "co-location center" operation. The prehensile brain must manage *fight-or-flight*, along with autonomic responses and the Central Nervous System (CNS) keeps the heart beating and breathing going while the *conscious aspect of self* is busy with other projects.

This is an interesting problem to consider: Just how much of the 20-watts of "average brain power" are humans allocating to the non-autonomic (i.e. involuntary) functions?

Two key concepts are to be understood: There is an autonomic nervous system (ANS) and a central autonomic system (CNS). The distinction is necessary because some functionality is semi-dispersible in a non-central sense.

To date, we have not been able to find any hard numbers differentiating energy allocations to the "personality" as opposed to the "cold fact

processor” levels of humans for activities such as tactile input, vision and so forth, nor are we even able to establish despite some excellent meta-studies, how much of the 20-watt brain is expended on autonomic functions.

This is not to demean the work in “The Autonomic Brain: An Activation Likelihood Estimation Meta-Analysis for Central Processing of Autonomic Function[48]” by Florian Beissner, 1, 3 Karin Meissner, 2 Karl-Jürgen Bär, 1 and Vitaly Napadow3, at all.

Rather, their work is an initial exploration of regional activity. It remains axiomatic that energy densities and consumption in a structure as complex as the brain (and extensions) is perhaps another 5-10 years away.

Circling back to point? We see a 20-watt brain – the “soul-weight” of which is already immeasurably small in mass due to Einsteinian constraints, so we may never be able to solve how much energy is consumed by “personality.”

Could it be that “half-wits” are half-*watts*?

Und Zo…

This question about “soul” or “personality weight” in a physical sense is worth asking because the question has been famously asked *before*. Wikipedia reports on the “21-gram Experiment[49]:”

“In 1901, Duncan MacDougall, a physician from Haverhill, Massachusetts, who wished to scientifically determine if a soul had weight, identified six patients in nursing homes whose death was imminent. Four were suffering from tuberculosis, one from diabetes, and one from unspecified causes. MacDougall specifically chose people who were suffering from conditions that caused physical exhaustion, as he needed the patients to remain still when they died to measure them accurately. When the patients looked like they were close to death, their entire bed was placed on an industrial sized scale that was sensitive within two tenths of an ounce (5.6 grams). On the belief that humans have souls and that animals do not, MacDougall later measured the changes in weight from fifteen dogs after death. MacDougall said he wished to use dogs that were sick or dying for his experiment, though was unable to find any. It is therefore presumed he poisoned healthy dogs.

Results

One of the patients lost weight but then put the weight back on, and two of the other patients registered a loss of weight at death but a few minutes later lost even more weight. One of the patients lost "three-fourths of an ounce" (21.3 grams) in weight, coinciding with the time of death. MacDougall disregarded the results of another patient on the grounds the scales were "not finely adjusted", and discounted the results of another as the patient died while the equipment was still being calibrated. MacDougall reported that none of the dogs lost any weight after death.

While MacDougall believed the results from his experiment showed the human soul might have weight, his report, which was not published until 1907, stated the experiment would have to be repeated many times before any conclusion could be obtained.”

Following the NY Times reporting of the story, criticisms abounded. But it planted the seed in the public mind that “souls might weigh something.”

In fact, the notion is persistent.

In 2009, the British website *Noetic Sciences* attributed a story to "the tabloid, *Weekly World News*, Nov. 8, 1988. By Ragan Dunn", a story that in 1988 East German scientists has claimed to have measured the weight of the soul.

From the article[50] *"In each case the weight loss was exactly the same– 1/3,000th of an ounce.*

"The inescapable conclusion is that we have now confirmed the existence of the human soul and determined its weight," Dr. Becker Mertens of Dresden said in a letter printed in the German science journal Horizon.

"The challenge before us now is to figure out exactly what the soul is composed of", he continued. "We are inclined to believe that it is a form of energy. "But our attempts to identify this energy have been unsuccessful to date."

Serial Port, Optical Cable, or String?

The matter of the "weight of the soul" is incredibly important because at its root lies a paradox we all "own a piece of."

That paradox is this:

IF (and it's a might *big* IF) the soul has *any weight at all*, then it is a form of *energy*.

It would then follow – since energy can be neither created, nor destroyed, that the energy serves some function. When you die, it must *go someplace*.

That's where we get into the "deep kimchee."

Since we do not *know* much about the *Afterlife* – despite all the fine research by Dr. Moody and those who have followed in his steps not to mention all those religious books worldwide – we are not quite clear what kind of *information model* we are looking at - *if the soul has weight.*

The three obvious models have analogs in contemporary robotics and mechanics.

The *simplest* model would be the "string." This theory (not to be confused with the formal *string theory*[51]) would posit that while living, we are merely like puppets and controlled from some other dimension by as-yet unknown *entities*. Think marionettes.

Obviously, the "string pullers" are not consistently good, or consistently bad – or always malicious toward humans – they're just *unknown entities*. They have their differences. This might explain the odd topology of human interactions...

Plato addresses these entities in his *Allegory of the Cave* while Jungians may think of them as the *archetypes*.

When we consider views of the Religionists, we can construct a "co-string theory." This would hold that out [*other* or God] is trying to do the "right things", but our *human* nature can pull on the string to our detriment. Hence, the human appetite for the forbidden (and apples). The personal work-out of Good-versus-Evil.

Except, of course, in the cases of demonic possessions, where the bad things

predominate. That would explain bad people and prisons. And why apples sell well.

The second level concept is it's more like a USB port. In a good bidirectional manner, the higher [or other] self-communicates but doesn't override the local (human) personality 'program' running in foreground. Higher self seems stuck on USB 1.0.

In many ways, computational evolution seems to be mimicking the Biblical evolution of God's relation to man. Visit artificial worlds like Second Life and you might notice it. Worrisome is that with human-looking robotics, we are now making "*images/idols in our own likeness*" which many Religionists view of *verboten*. Have we made *that* mistake before? Is the Internet *Babel*?

Did they know something we don't or are we totally blinded by money?

Even more significant is the question raised by the recent report in *The Atlantic* offering insight into how Facebook A.I. chatbots had *developed their own language*:[52]

> "In the report, researchers at the Facebook Artificial Intelligence Research lab describe using machine learning to train their "dialog agents" to negotiate. (And it turns out bots are quite good at deal making.) At one point, the researchers write, they had to tweak one of their models because otherwise the bot-to-bot conversation "led to divergence from human language as the agents developed their own language for negotiating." They had to use what's called a fixed supervised model instead."

Last, but not least, the third major construct suggests the optical cable paradigm, or what I like to think of as the *GoPro Model* of the Universe.

In this model, we are little more than high-resolution emissaries (bio-explorers over time?) sent here with a small recording core (soul) from other dimensions. That being the case, there comes a time after the end of Life when (presumably at the Pearly Gates), we all get to upload our lives for "the big review/edit" and God enjoys millions of applicants submitting their "best films" and YouTube videos for His Cannes Festival of All-time.

Sheesh.

We know that the “thinking” done by humans is a portion chemical, a portion electrical, and somewhat *light*.

I recently recounted for subscribers to my www.peoplenomics.com website, a series of experiments I’ve done involving “light-pumping” of various frequencies [colors] into the *trigeminal nerves* of the face, forehead, and temple regions.

Done at the right power densities, there’s a low-level but seemingly quite real “energizing” effect. And the results of low level laser light therapy (LLLT) for speeding recovery from bone fractures with pumped light in the 660-700 nm infrared spectrum is becoming well-accepted[53].

Without going off the deep-end, we can see some “shared headspace” between the ontology of metaphysics, the quantum researchers, the religionists, as well as we the non-expert, just plain curious.

With such a wide pallet of mental constructs at the macro level, there has yet to be a major coalescence of research. When it arrives, it should begin to reveal more precisely the nature and makeup of “the Simulation” we may be living in.

6. Stalking the Simulation: Where is the Key?

[**High-level:** If we *do* live in a *simulation*, wouldn't it make sense that we could figure out how to escape from this "Escape Room" adventure gracefully? Or, is it possible there are just too many "fake clues" and cut-outs to find the exit? How then?]

Imagine for a moment that you're a cow.

You have been picked up by aliens in a UFO somewhere outside of Weston, Colorado. We expect you know Weston is a kind of nexus of cattle mutilations, up in the foothills out west of Trinidad, Colorado.

The aliens decide instead of their usual grisly experiments, they are going transplant you into a cow's body and set you in the middle of a herd in a big field filled with other cattle. They also hand you a burner phone. Odd lot, aliens.

Knowing the aliens will be back to get you – and they are not 'hamburger helpers' – you decide to make a run for it.

Here's the problem: How do you find the *way out*?

The answer should be obvious: The *way out* is not to be found in the *middle of the herd*.

If there is a way out, it will be found "around the edges."

There's a wonderful scene in the movie *Men in Black* where one of the heroes hold up a tabloid newspaper and says something to the effect "*We get most of our leads in here.*"

So too, in the news business, the REAL important stories are seldom covered in press conferences and news releases. They are in the boring reports. Yeah, data.

In economics, a handful of stories fit this mold. One is the Federal Reserve Money Stocks measure report out Thursday afternoons. It says (if you read it for a while) essentially how much money is being "made up on the fly."

Others include things like our Aggregate Index view of multiple global

markets.

Back to the cow-in-the-field analogy…the Dow Industrials may be thought of as just being one fence line. The S&P 500 is another side, while the NASDAQ is another. The total money trading will be found corralled in this vicinity.

In the case of finding a Master Key to unlock the present World Simulation, though, what exactly are we looking for? Well, the *way out*, of course.

Here are a few ideas:

Are we looking for powerful, mostly correct insights into the short-term future?

Sure, that would be nice, but what about tackling and coming up with answers to the REAL **big** secrets.

Like jumping *between Dimensions* of reality, or *time-travel*, and maybe perhaps *anti-gravity* breakthroughs. Where would we find those items?

Let's borrow the Crime Scene Investigations (CSI) idea.

We've been called (as top-notch investigators) to a big pasture outside of Weston, Colorado. A rancher there reported that an odd cow had mysteriously appeared amid his herd. This particular cow had a cell phone. Only cow in the herd with brains and air-time, so it stood out. Spoke broken English, too.

It ran around to all four corners and along the fence lines looking for a way out. Then it disappeared.

With the CSI mindset, how do we proceed? The cow is obviously gone.

We interview a few ranch hands and look at their reports. We'd be looking for *similarities* in what they reported seeing. All we can do is gather data.

Time and Dimension Data Reports? Seriously?

Absolutely and positively.

The high-level problem is that we are conditioned to look at such reports as UFOs, the Philadelphia Experiment, and missing cows as *lore*. Reports that MAY contain a *kernel of truth.* Data which has been bounced around and been perverted over time. Humans aren't digital, so when we pass off data to one-another, it degrades.

In the coming short chapters, I'll make the case that we can begin a new scientific approach to such reports by establishing a workable methodology to reduce data degradation.

That others have not followed such a rigorous approach should not be surprising. There is little incentive to apply a lot of energy to non-problems because the "rest of the herd" has been programmed to believe there couldn't possibly be any holes in the fences. It follows that there is no worthwhile knowledge to be found from old reports. The *government* would tell us, right?

I beg to disagree, and I'll show you why in detail. Once we've done that, we can lay out a new course of research that might find some interesting results.

Sure, the "bigger hammer" theory of Science can evolve a simple idea from a chance encounter with criticality into a thermonuclear city-killer. It's also true that many times the *multivariate* approach – studying many, inter-related, interacting alternatives – is the more direct and correct path.

Photography was originally simple tintypes[54]:

> "A tintype, also known as a melainotype or ferrotype, is a photograph made by creating a direct positive on a thin sheet of metal coated with a dark lacquer or enamel and used as the support for the photographic emulsion. Tintypes enjoyed their widest use during the 1860s and 1870s, but lesser use of the medium persisted into the early 20th century and it has been revived as a novelty in the 21st."

Repeatedly going back to the lab and mixing up different photographic processes eventually arrived at this[55]:

> "In earlier Polaroid instant cameras, the film is pulled through rollers which breaks open a pod containing a reagent that is spread between the exposed negative and receiving positive sheet. This film sandwich develops for some time after which the positive sheet is peeled away from the negative to reveal the developed photo. In 1972, Polaroid introduced integral film, which incorporated timing and receiving layers to automatically develop and fix the photo without any intervention from the photographer."

Once again, as we noted in the gap between the Leyden Jar and Edison's lights, there is a sizeable gap between the initial breakthroughs (tintypes) and the high evolution of the art (Polaroid film).

Looking at "the invention gap", we see that tintypes to Polaroids was about 115 years with the precursors to tintypes showing up in the 1850's. As with Lights, photography followed a 100+ year *optimization* cycle. What has just been invested today that has a 100-year optimization future? That's where to make money.

I'd invite you to consider mass marketing of optimized lights – which has been through a similar sequence when one considers the Edison lights and then looks at the past 10-years as mass adoption of Light Emitting Diode-based (LED) lights has occurred.

It has always struck me as strange that the 100-year, or longer, "gestation of concept" period takes so long. But, there it is.

It leads us to wonder: Do humans have some internal clock that prevents us from being too successful, too quickly?

7. Bermuda Triangle

[**High-level:** If there's a chance that we can stumble into the "Escape Room Key" by looking at anomalous phenomenon and reports, why not start with a common bit of folk lore like the *Bermuda Triangle*? Sounds good…let's roll....]

If we're going to leap from hard science into the yet-unexplored, the best way is to get into the shallow-end of the pool. The famous *Bermuda Triangle* will do brilliantly.

The stories about the Bermuda Triangle are arguably traceable to Christopher Columbus who, on his voyage of discovery, found on October 8, 1492 that his magnetic compass was wandering about, not pointing reliably.

Mariners, like Columbus, have a very keen sense of their surroundings. Not only are their eyes exceptionally adapted to the starlight at sea, but they are familiar with the North Star. To Columbus, the variation of the compass was perplexing.

Things were even more confused when, three nights later, on October 11, 1492, the Columbus and crew saw three mysterious lights in the sky.

History records that the following day, October 12, 1492, his crew sighted land and that's when historians pick up the trail.

These events, however, are instructive in that they offer a first hint at some "odd science" that has been around for a long time. Since odd science is unwelcome in the land of Reductionists, debunkers have had a field day with debunking the Columbus story.

One theory – promoted in YouTube videos attempting to debunk the Bermuda Triangle – is that Columbus was not actually "inside the Triangle" when his observations were made.

The nice thing about the scientific method, however, is that it lends itself very nicely to research like this.

We know from historical accounts that the Columbus voyage had begun on August 3, 1492. It is reliably reported that Columbus departed from Castilian

Palos de la Frontera (on the river Saltes, at the confluence of the rivers Rio Tinto and Rio Odiel).

His landing – which was NOT in North America, but rather in what would later be claimed as Bahamian waters – was likely toward the southern end of the Bahamas, perhaps Eleuthera, or further south in the Turks and Caicos Islands group.

An historical side note worth mentioning is that the Turks and Caicos today are a British Commonwealth which, like the Cayman Islands south of Cuba, are mainly tourism and tax avoidance destinations. Although Pan American Services provided major support to NASA in the 1960 and 70's operating ground stations for the American space program from the islands, the main population center on Grand Turk spent much of its early history providing salt. Marsh flats were flooded, the seawater was evaporated by the nearly tropical sun, and salt harvested by indentures to be sold in trade.

The Columbus voyages are fascinating because we have witnessed in recent history, a serious attack on Columbus' character. For example, the *Rapid City Journal* reported in 2016 on the "Top Five Atrocities Committed by Christopher Columbus.[56]"

This historical (sociological) note is of interest because in modern, politically-correct society, we have been conditioned – largely by those wishing to sanitize history – that the 1400's were not a particularly *polite* time.

Some 200 years later, June 7, 1692, the area around Port Royal, Jamaica was decimated by a major earthquake. Prior to that, Port Royal had effectively become the world gathering point for Pirates. Port Royal's activities, as discussed in the many well-researched books on piracy, reveal Columbus to be no worse than contemporary captains of his time. Mostly not nice and for sure not Johnny Depp.

Were we not engaged in seriously deficient scientific efforts, we could spend the rest of this book discussing whether claims that Columbus used natives as dog food, as claimed by some[57]. Or whether, as Norman Cohn charges, it's an expression of "Europe's Inner Demons: The Demonization of Christians in Medieval Christendom[58]."

Whatever. Instead, we shall attend to the matter of the Bermuda Triangle and Columbus's Bahamas arrival.

The voyage distance is approximately 4,162 (statute) miles.

This means 41-days at sea. Distance traveled would average 101.5 miles per day, and in season it was likely a steady pace. That's because on departing Spain, Columbus had studied enough to sail south to off the African Coast (Azores route) and then pick up the Northeast Trade Winds to blow him west.

These winds, usually flowing generally from northwest Africa to the Caribbean should be familiar to you. It's the route hurricanes and tropical depressions favor as they track the warm waters that make a big circuit of the Caribbean and then become the Gulf Stream on their northward journey. Once to Europe, the thermohaline conveyor[59] takes over.

As the Gulf Stream works its way up the east coast of what's now the United States, the Easterlies begin, providing a generally speedy, though often rough, return for sailing ships to Europe.

This brings into focus points to consider.

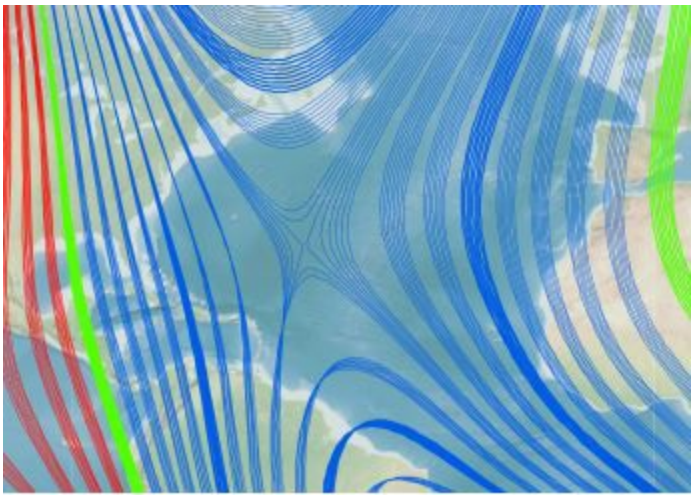
First, despite what self-proclaimed "debunkers" would have you believe, the Columbus voyage did transit the Bermuda Triangle boundaries and was likely in it when both the magnetic compass variation as well as the "mysterious lights" were seen.

Sadly, for the world of *woo-woo*, these two events are likely not very mysterious, at all. Drat!

Regarding the compass, it was not – as some writers have proposed – "spinning." Instead, the compass was simply *no longer pointing to the North Star* as mentioned previously. While this seems trivial, especially to anyone with an understanding of *isogonic lines*, it isn't. Isogonic "reference lines" denote the world's local magnetic field due to a phenomenon called *magnetic declination*[60].

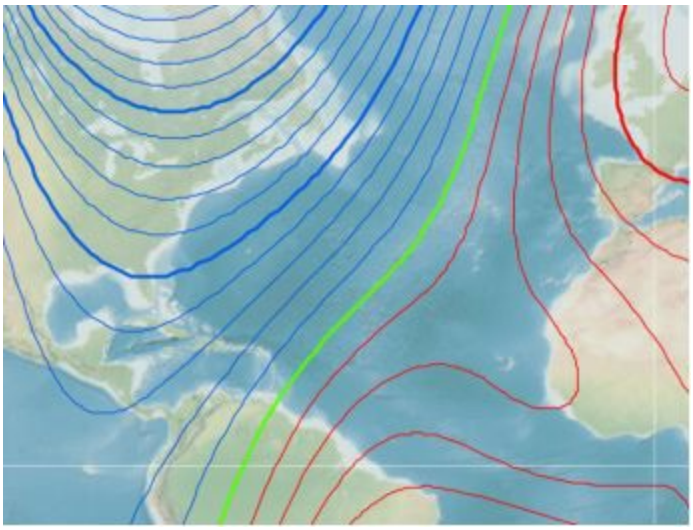
What is often under-reported by researchers is that magnetic declination can have a tremendous effect on the outcome of navigation, *over time*.

Here's what the isogonic lines will look like in 2018:



There are several computer models involved, but the key thing is to look at is the solid green line that comes up the west coast of South America, cuts north across Mexico, and then heads up toward New Orleans, and then up into the center Midwest of the U.S.

Compare this with where north was in 1590 AD – since that's the oldest computer modeling I could find. Notice where the green zero-variation line is presently (above) versus what Columbus experienced 100 years earlier that the modeled plot below.



One would expect that the situation 100-years earlier to have placed the line one division east of its 1590 AD location.

This gets us to a couple of observations.

The first is to wonder whether European exploitation and colonization of

Africa would have been so easy at any other time in magnetic history? As you can see, the variation in 1590 AD would have been vastly different than today. Magnetic field lines of the Earth move around. A lot, too, given centuries.

A second thought is that if you're a Ph.D. history major, the impact of declination would make for a fascinating study since the Chinese fleet, as described in Gavin Mezies' book "*1421: The China Discovered America*[61]" reliably reported the Chinese fleet using a crude magnetic device for navigation. Is there useful data on field drift to be found in those descriptions?

The Chinese Fleet's eunuch[62] admiral Zheng He[63], was quite meticulous in his record-keeping although the Chinese were embroiled in domestic political turmoil by the time of his voyage's end. Care to burn the fleet?

One final magnetics research point: When pirate treasures were buried on remote islands, it is possible that changes in magnetic declination (over time) were responsible for certain purported islands "disappearing" when later voyagers returned with antique maps intent on digging up booty.

Next, there is the matter of Columbus' "mysterious lights" seen by his crew the day before landfall.

I'm inclined to go with the idea that it was likely from a brightly-burning bonfire at some village ashore.

It helps to have read James Michener's book *Caribbean*, to appreciate that the simultaneous burning of *two* bonfires, regardless of distance, is unlikely behavior for the Arawak Indians[64].

More likely is that Columbus, et al, were merely seeing a variant of a "superior mirage." Few have likely read on it, so here's a short Wikipedia description of the Fata *Morgana* mirage phenomenon[65]:

> A Fata Morgana (Italian: [ˈfaːta morˈgaːna]) is an unusual and complex form of superior mirage that is seen in a narrow band right above the horizon. It is the Italian name for the Arthurian sorceress Morgan le Fay, from a belief that these mirages, often seen in the Strait of Messina, were fairy castles in the air or false land created by her witchcraft to lure sailors

to their deaths. Although the term Fata Morgana is sometimes applied to other, more common kinds of mirages, the true Fata Morgana is different from both an ordinary superior mirage and an inferior mirage.

Fata Morgana mirages significantly distort the object or objects on which they are based, often such that the object is completely unrecognizable. A Fata Morgana can be seen on land or at sea, in Polar Regions or in deserts. It can involve almost any kind of distant object, including boats, islands and the coastline.

A Fata Morgana is often rapidly changing. The mirage comprises several inverted (upside down) and erect (right side up) images that are stacked on top of one another. Fata Morgana mirages also show alternating compressed and stretched zones. [1]

The optical phenomenon occurs because rays of light are bent when they pass through air layers of different temperatures in a steep thermal inversion where an atmospheric duct has formed. [1] (A thermal inversion is an atmospheric condition where warmer air exists in a well-defined layer above a layer of significantly cooler air. This temperature inversion is the opposite of what is normally the case; air is usually warmer close to the surface, and cooler higher up.)

In calm weather, a layer of significantly warmer air can rest over colder dense air, forming an atmospheric duct which acts like a refracting lens, producing a series of both inverted and erect images. A Fata Morgana requires a duct to be present; thermal inversion alone is not enough to produce this kind of mirage. While a thermal inversion often takes place without there being an atmospheric duct, an atmospheric duct cannot exist without there first being a thermal inversion."

I confess, I haven't read Columbus logs (there's only so much time for research!), but it is possible that a similar condition may have existed. Multiple optical path *Fata Morganas*? Why not?

The phenomenon of multiple optical paths is well-described. In addition, having lived in the Caribbean for a few years, it's very typical for the winds in the region to "lay down" at night and resume about mid-morning the next day. Couple this with periodic cooler waves of air perhaps wending

southeast from the U.S. mainland, and a stronger case for *Fata Morgana*, or a semi-tropical variant of a *superior mirage*, evolves.

There are many stories involving the Bermuda Triangle, but most of them are not particularly bothersome. After all, the region is known for occasionally violent weather, quickly-arising storms, the vagaries of the Gulf Stream, and a lot more.

In the case of the "mysterious" missing flight of WW II Navy torpedo bombers, "Flight 19," the most likely explanation is that the training supervisor who flew the mission was a flight instructor who'd previously only trained crews in the Florida Keys. He would have had "*fly north to find land*" drilled into his training.

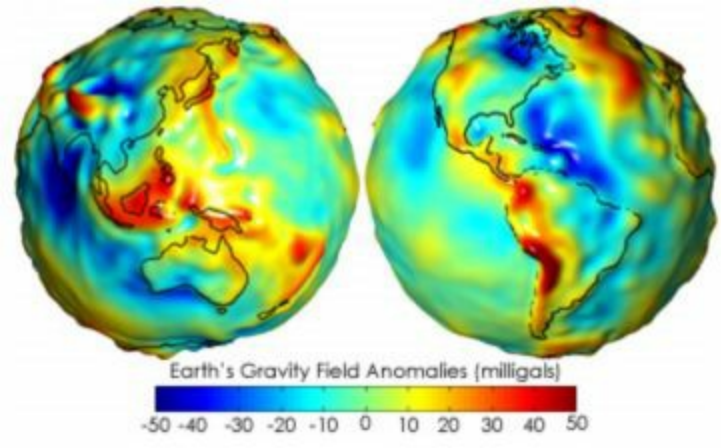
In that location, he would have likely insisted that young pilots learning the ropes follow his instructions to fly north and then east in order to arrive over the southwest part of Florida. From there, a flight back to the Keys is simple "island-hopping."

Unfortunately, the Flight 19 training officer was flying in unfamiliar territory – a flight which was already *east of Florida* and, after turning north over the Bahamas, he would have likely instructed his squadron to turn north, fly for a while, and then turn *east*. The likelihood of this is great, particularly if the officer involved had not refreshed himself on the strategies to "find land when lost" on the *other* (wrong) side of the Florida peninsula than the one he was used to.

With some of the "dust" of history out of the way, we can then begin to look at reports of possibly more *genuinely* anomalous events in the region.

One of the most intriguing concerns are plate tectonics and electrical disturbances. And one of the places it could *theoretically* be expected is in the Bermuda Triangle region.

As you consider the following NASA imagery, please note that the appearance of gravitational anomalies is generally in areas of overlapping (subducting) continental plates[66].



You can see several extremes of positive and negative readers. The blue readings around the eastern Caribbean (especially near Haiti and Puerto Rico) should be noticed.

In passing, note the deep red areas in the southern Andes, the area around Indonesia where the Pacific Plate is pressing material under the Himalayan Plate, and across the southern and northern extremes of the Pacific Plate which rounds out the "Ring of Fire." We'll refer to these later.

The immediate relationship to consider (having dispensed with the sea monsters and such) is whether *odd electrical events* might be common to anomaly areas. And the evidence of such electrical events may be realized in *clouds*.

In 2008, *New Scientist*[67] reported on some fascinating research that considered the "earthquake cloud" phenomena:

> "Geophysicists Guangmeng Guo and Bin Wang of Nanyang Normal University in Henan, China, noticed a gap in the clouds in satellite images from December 2004 that precisely matched the location of the main fault in southern Iran. It stretched for hundreds of kilometers, was visible for several hours and remained in the same place, although the clouds around it were moving. At the same time, thermal images of the ground showed that the temperature was higher along the fault. Sixty-nine days later, on 22 February 2005, an earthquake of magnitude 6.4 hit the area, killing more than 600 people."

The method of action for such clouds – which are also sometimes reported as luminous at night – is likely the Piezo-Electric Effect. This is extensibly

related to another phenomenon: Earthquake *Lights* – another reliably-sourced aerial phenomenon[68] :

> "The lights are reported to appear while an earthquake is occurring, although there are reports of lights before or after earthquakes, such as reports concerning the 1975 Kalapana earthquake. They are reported to have shapes like those of the auroras, with a white to bluish hue, but occasionally they have been reported having a wider color spectrum. The luminosity is reported to be visible for several seconds, but has also been reported to last for tens of minutes. Accounts of viewable distance from the epicenter varies: in the 1930 Idu earthquake, lights were reported up to 70 miles (110 km) from the epicenter. Earthquake lights were reportedly spotted in Tianshui, Gansu, approximately 400 kilometers (250 mi) north-northeast of the 2008 Sichuan earthquake's epicenter. During the 2007 Peru earthquake lights were seen in the skies above the sea and filmed by many people. The phenomenon was also observed and caught on film during the 2009 L'Aquila and the 2010 Chile earthquakes. Video footage has also recorded this happening during the 9 April 2011 eruption of Sakurajima Volcano, Japan. The phenomenon was also reported around the Amuri Earthquake in New Zealand that occurred 1 September 1888. The lights were visible in the morning of 1 September in Reefton, and again on 8 September. More recent appearances of the phenomenon, along with video footage of the incidents, happened in Sonoma County of California on August 24, 2014, and in Wellington New Zealand on November 14, 2016 where blue flashes like lightning were seen in the night sky.
>
> Appearances of the earthquake light seem to occur when the quakes have a high magnitude, generally 5 or higher on the Richter scale. There have also been incidents of yellow, ball-shaped lights appearing before earthquakes."

We find a 2008 paper, "On a preseismic electric field "strange attractor" like precursor observed shortly before large earthquakes [69]" compelling because it offers a rationale why tension-driven micro earthquakes would offer strange electrical behavior, especially immediately before earthquakes.

> "**Abstract.**

> The Earth's electric field, recorded by two different and distant monitoring sites located in Greece, is analyzed in terms of monochromatic signals (T=24h). The analysis is based on the mapping procedures borrowed from the study of non-linear dynamic systems and chaos. The specific analysis applied on the electric field recorded for some weeks before the occurrence of 3 large EQs which occurred in Greece shows some very interesting results. Long before the EQ occurrence the phase map generated by the uncorrelated each other signals recorded by a pair of distant monitoring sites is characterized by pairs of hyperbolas of random azimuth asymptotes. Some days before the occurrence of the earthquake the recorded signals are strongly correlated and therefore the phase map is characterized by ellipses. A couple of days before the EQ occurrence the electric signals become again uncorrelated due to the fact that their generating mechanism (large scale piezoelectricity) approaches its final stage and therefore hyperbolas characterize again the phase map. When this stage is observed the pending EQ shortly (in terms of days) takes place. Three detailed examples from large Greek EQs are presented towards the validation of this mechanism."

A possibly related phenomenon to the "earthquake clouds" – which we infer may be Piezo-electrical energy released by the twisting and bending of crystalline rock (such as granite or quartz) in an earthquake prone area – is the matter of lenticular clouds. These are sometimes linked to earthquakes, and at other times to UFO reports[70] not to mention weather-manipulation efforts[71].

Without going into a deep discussion of lenticular clouds, they are a well-described phenomenon actively sought by glider pilots because of the strong rotary winds that accompany them[72]. The world's highest glider altitude (>50,000-feet) was achieved using such a weather system.

The reality of lenticular clouds and earthquake clouds might have something in common: Earth electricity.

The conditions observed in and around the Bermuda Triangle are not entirely unique. Although not necessarily backed by scientific data, there are purported to be up to eleven *other* "Devil's Triangles" around the world[73].

One lies southeast, well offshore from Rio De Janerio in the South Atlantic. It is called the South Atlantic Anomaly (SAA).

While the Bermuda Triangle promoters can point to the Bimini Road – an area that appears to be sunken, regularly-spaced paving stones (that scientists claim in a natural phenomenon) – the South Atlantic Triangle offers little that's archeologically unique.

What does set this area apart is that it's the location of Earth where the Van Allen Radiation Belt comes closest to Earth.

That may have prompted the *UK Daily Mail* to report in 2014:

> "Strange flashing lights and spacecraft-killing radiation: The 'Bermuda triangle of space' revealed in unprecedented detail. Shuttle astronauts complained laptop computers would sometimes crash when they passed through the anomaly: Also responsible for strange flashing lights; Area now found to be moving through space.[74]"

This anomaly is of interest because it directly relates a second *energy* phenomenon to the geographic area, in addition to the magnetic anomaly of the Bermuda Triangle.

Our research into energy comes into focus as we review the other triangles. Popularized as "Vile Vortexes" we've got reason to be somewhat skeptical of popular (allegedly non-fiction) accounts.

The location of the Algerian Megaliths, as they have been referred to in the Vile Vortex literature, are among the most problematic. This is because promoters of "vile vortex" locations tend to gloss over the details; something we try to avoid.

For example, in the location described as "south of Timbuktu" likely refers not to Algeria, but modern Mali, instead. Located 12-miles north of the Niger River, the "megaliths" research there offered little of substance. Nothing approaching *woo-woo*.

The closest (geographically) to where the map locations seem to indicate a "vile vortex" should be is Tondidarou which is summarized as follows:

> "Tondidarou is a small town and megalithic archaeological site in

> Niafunké Cercle, Timbuktu Region, Mali, northwest of Niafunké, about 150 kilometers south-west of Timbuktu. The site, located on the eastern bank of Lac Tagadji, was discovered by Jules Brevig in 1904 and is said to be "defined by three groups of stone megaliths", monoliths which are a "remarkable collection of phalliform stone monuments." Ancient Egypt in Africa refers to the site as "Diol's 'Egypt-influenced' phalliform stone circle of Tondidarou". Eugene Makes was the first to seriously document the stones at Tondidarou in 1924. It was extensively excavated in around 1980. The site is dated to 670 - 790 AD[75]."

Although it's a bit difficult to sink ships in this area south of the Sahara Desert, it is likely ancient people has *some* motivation for locating a phallic collection here. It seems rather like the megalithic structures of England and other locales mostly conceded to be religious in nature, though we may need a discussion of *ley lines* as we continue forward.

Nonetheless, other than being an important trade route, Timbuktu and environs main "claim to fame" seems to have been as a fallback position for regional peoples as Saharan desertification processes began. Penis-shaped monuments and all. But a *vortex*? Consider when was the desert encroaching? [76]

> The modern Sahara, though, is not lush in vegetation, except in the Nile Valley, at a few oases, and in the northern highlands, where Mediterranean plants such as the olive tree are found to grow. It was long believed that the region had been this way since about 1600 BCE, after shifts in the Earth's axis increased temperatures and decreased precipitation, which led to the abrupt desertification of North Africa about 5,400 years ago. However, this theory has recently been called into dispute, when samples taken from several 7 million-year-old sand deposits led scientists to reconsider the timeline for desertification."

Still, we again run across the scent of anomalies, though perhaps not of the present era but prehistoric times in the "Alkaline magmatism after collision in the Pan-African belt of the Adrar des Iforas (Mali)[77].

Please note that we do not confuse magmatism with magnetism; rather it

seems interesting considering our studies of Earth Piezo-electrics to note this location is the approximate vicinity of a plate tectonic collision and subduction process.

Our fourth "vile" spot lies off southeast Africa. Here, vortex promoters mention "Zimbabwe mines and structures." Yet the most interesting story from the region is from the island Madagascar. A report at *Anomaly Info* (dotcom) reveals this: "In 1874, a letter written by a German traveler named Karl Leche was published in journals, magazines, and newspapers in the United States and Europe in which he described a most unusual plant: a man-eating tree![78]

While the report is entertaining, and worth reading if you have time, it is most likely a fabrication. (Though as I write this, a pine tree in our woods is eyeing me, suspiciously!)

Much more relevant, however, is the 2007 paper "Gravity anomaly patterns in the south-central Zimbabwe Achaean cracton and their geological interpretation[79]."

So much for that vortex.,. Let's press on to the next one cited by promoters: The Indus Valley of Pakistan. Here again, the reasons seem somewhat obscure and based more on historical, rather than supranatural, events. Letters about disappearing planes and appearances of gold is a bit thin for us. Accidents happen…so does creative fiction.

On the other hand, "Gravity anomalies and the flexure of the lithosphere in the Karakoram, Pakistan[80]" is more to our liking.

For that matter, so is E.A. Glennie's 1955 discussion of "Gravity Data and Crustal Warping in North West Pakistan and Adjacent Parts of India.[81]"

You can learn a lot about plate tectonic theory where Glennie's paper begins with this – we like researchers who *cite themselves*:

> "The crustal warping hypothesis (Glennie, 1932; 1933) assumes that the Earth's crust above the MohoroviCiE discontinuity has been affected by up and down warpings which disturb its layers uniformly. These warpings are not necessarily directly related to the present surface topography of the Earth. There is therefore a deep-seated

topography of the crust, which has an important effect on gravity. The present paper is an attempt to survey this hidden landscape below an extensive region, which has a well mapped surface topography.[82]"

What becomes clear, as we are working our way around the globe, chasing after "vile vortices" is that a computer search of a sufficiently large portion of the world *will* always result in anomalies of various sorts. But, are they meaningful or reproducible? Therein lies the quest.

For example, anywhere there has been petrochemical exploration, you'll find reference to gravity and anomalies.

To prove the point, I put in "Texas magnetic anomaly" as search criteria and was immediately rewarded with "Gravity and Magnetic Anomalies Compared to Moho Depth throughout the State of Texas[83]." A Master's thesis and very interesting, but mainly it serves to underscore that "anomalies" does not necessarily translate to "weird and/or hinting of new energies." No Texas Vortex is noted.

That's what we're after. The Big Stuff.

Still, a few more hops to go and you'll realize that the Bermuda Triangle "phenomenon and claims" have perhaps been exaggerated at the expense and risk of losing an important research trail in the "noise clutter" thrown up by the "non-fiction" writer types. We suppose it sells books, though.

A resulting question? "Is this entirely coincidental, OR is there some organization or group (*government?) that has a vested interest in promotion of what I think of as "*data obscuration*?"

Our next stop is "Wharton Basin is the marine area of the north-east quarter of the Indian Ocean. It is named after William Wharton (1843-1905), Hydrographer of the Navy. British, don't you know. Alternative geographical names are Cocos Basin (after the Cocos Islands) and West Australian Basin. It lies east of the Ninety East Ridge and west of Western Australia.[84]"

Based on what we've just discussed about the preponderance of data on magnetic anomalies globally, (thanks oil industry!), we are hardly surprised to read about "The discovery of a conjugate system of faults in the Wharton

Basin intraplate deformation zone[85].”

No doubt, the disappearance of Malaysian Airlines flight 370 is the highest profile recent disappearance in the region, but the lack of any data suggesting non-routine phenomenon strikes us as less than convincing.

On the other hand, the data evolving on the Sunda subduction zone (think 2004 Banda Aceh tsunami) and the periodic magnetic reversals recorded in Wharton Basin strata[86] is of more interest.

Could it be that there are periodic magnetic disturbances at these (and other) locations around the earth?

Our next visit is to the Dragon’s Triangle which, coincidentally, is well east of where the Chinese are currently building military islands in the East China Sea, north of Taiwan.

The purported danger zone takes in a good bit of the Philippine Sea. The dimensions run from Tokyo down to the Philippines Coast, then northeast to the Mariana Islands.

Wikipedia explains the debunking of the Dragon’s Triangle region this way[87]:

> “In 1995, American author Larry Kusche published The Bermuda Triangle Mystery Solved, debunking Berlitz’s claims about both the Bermuda Triangle and Dragon’s Triangle. Kusche’s research claimed that Berlitz’s military vessels were actually fishing vessels, and some of those listed by Berlitz sank outside the area defined by the Dragon’s Triangle. Kusche also wrote that the Japanese research vessel carried not 100 personnel, but only 31 and that an undersea volcano destroyed it on September 24, 1954”

Called “no ma umi” in Japanese, it is an area dangerous to ships and humans. Promoters of vile vortices claim the reports go back 3,000 years.

Still, we can’t get too worked up over the Dragon’s Triangle. Remember, the word “kamikaze” does not just refer to crashing fighter aircraft into American ships In World War II. There is something much deeper to notice that explains the Devil’s Triangle to some extent:

> “The kamikaze (Japanese: 神風) literally "divine wind" were two winds or storms that are said to have saved Japan from two Mongol fleets under Kublai Khan. These fleets attacked Japan in 1274 and again in 1281. Due to the growth of Zen Buddhism among Samurai at the time, these were the first events where the typhoons were described as "divine wind" as much by their timing as by their force.[88]

It seemed perfectly logical that an area where multiple typhoons have been documented to merge, would be a region of unusual maritime losses. But then something occurred to me.

As I stared at the map for a while, a thought began to percolate up into consciousness: We notice that the disappearances and odd phenomenon claims seem to occur *to the west* of subduction zones. The HIGH side.

In the Devil’s or Dragon’s Triangle, as this area is known, we see how the Marianas Trench is just 120-miles east of the Marianas Islands. And that lines up very damn well with how the Bahamas line up east of the magnetic anomaly sitting out in the Atlantic a day, or two’s, sail from Columbus’ landing site.

With this notion in mind, we move down to the Loyalty Islands anomalies claims and find, as expected, anomalous “Gravity measurements in Loyalty archipelago, southern New Caledonia and the isle of Pines[89].” Look surprised.

In a 1982 paper discussing the “Termination of the southern New Hebrides subduction zone (southwestern Pacific)[90]” we discover this little gem:

> “According to our model, two hinge zones, tearing the down-going slab along directions which parallel the convergence vector (N70" E), reasonably account for most seismological and petrological data from the region. The approach of the Loyalty islands ridge towards the trench and its increasing influence on the subduction regime is beginning to complicate this scheme.”

This seems like an interesting region to attempt some understanding of whether there is “strange energy” in vicinities to the west of subduction zones.

We found, for example, of a ship lost in the region more than fifty years ago.

While studying New Caledonia for this book, I ran across this promising lead:

> "The island's administrative center is at Tadine, where the ferry from Noumea calls. A monument at the wharf recalls the 126 persons who perished in the disappearance of the interisland trader *Monique* in 1953[91]. No trace of the ship was ever found."

An investigation of ocean geography with Google Earth and other tools revealed New Caledonia and the Logout (Loyalty) Islands sit (as our theory might suggest) southwest of the subduction area in a formation smaller than, but like the Marianas (and Bahamas) in certain regards. Uphill from the deep.

Our research now leads to another thought: Is there any statistical link between the ship's disappearance and the appearance of an earthquake in the next 120-days, or so, in the region?

This will be a tough one to find since geophysical data was not as robust in the early 1950's.

Thanks to the research work found online [92], we can gather a few more details about the missing ship identified as the Monique:

> "Monique. French motor-vessel, composite vessel, 240 tons. Built 1945. Based in Noumea. Captain Charles Ohlen. With a crew of nineteen and 101 passengers, disappeared on a passage from Mare in the Loyalty Islands to Noumea, New Caledonia, since 31 July 1953."

This turned out to be a *shockingly good* find. Because *exactly* when our newly arising theory *predicts*, there should be a major earthquake (within 90-120 days), we find this which left me with a dropped jaw:

> "The 1953 Suva earthquake occurred on September 14 at 00:26 UTC near Suva, Fiji, just off the southeast shore of Viti Levu. This earthquake had a magnitude of Ms 6.8. The earthquake triggered a coral reef platform collapse and a submarine landslide that caused a tsunami. Eight people were reported killed; a wharf, bridges, and buildings were severely damaged in Suva.[93]"

It would be wildly irresponsible to claim that such a relationship based on a single case. But it reinforces the notion of a line between pre-earthquake Piezo-electric effects that MIGHT *prove* a causal relationship with ship disappearances. The temptation was there to dig a little more deeply into events in proximity to major subduction zones.

More digging in the "unexplained" files found the case of the *Joyita*:

> "Joyita. Inter-island trader, 70 tons. Based in Honolulu. Disappeared on a routine passage between Samoa and Tokelau in October 1955. Number of passengers uncertain - between nine and twenty- five. Her hull was found adrift off Fiji several weeks later.[94] "

Within weeks, the earthquake, predicted by our new-found crackpot theory materialized: "A magnitude 6.1 earthquake struck Tonga on November 10 at a depth of 65.0 km.[95]

Theory was becoming promising, indeed!

But a problem arose: That has to do with the location of the Tongan quake being south of the *Joyita*'s disappearance area. Our theory might have suggested something else, but then again, who's to say that any Piezo-electric effects don't wander (or drift or occur) in some not-yet understood way? It is, after all, just a theory…

The Hawaiian volcano "vile vortex" is an even sketchier bit of fictionalizing.

If you go seriously looking for what is called the vortex at the "Hamakulia Volcano[96]" it is allegedly recorded as "east of Hawaii."

Unfortunately, when one clicks through various online sources, it begins to appear as though Hamakulia is simply a "put-on." There is no such place I could find[97]. You're welcome to look, but in the Hawaiian-Emperor range with various seamounts, and both goyot and island names in Wikipedia, there's nothing of substance. It sounds only like a 'spin' off the word *Hamakua* which is a district on the northeast side of the Big Island (of Hawai'i), bro.

To be sure, there are various representations made about the importance of being on the *south* end of the Big Island – and some assertions made about vortices at about 19.5-degrees[98] above or below the equator.

I found little support for that – nor did I find data to support claims of "numbers of ships and planes have disappeared" that from the region.

Our final vortex to consider is supposedly near Easter Island.

Already known and famous for the megalithic carvings, this region already has a reputation for being a bit odd. Grist for the *fictioneers*.

Anthropologist Jared Diamond proposes in Collapse: How Societies Choose to Fail or Succeed[99]" that Easter Island society collapsed because after arriving in the 700 A.D. period, residents likely did "slash and burn" agriculture, denuded the landscape, and then were stuck out in the Pacific 1,000 miles from the nearest friendly port.

Alternatively, a couple of credible researchers offer a view in "The Statues That Walked: Unraveling the Mysteries of Easter Island[100]" that no, it wasn't Collapse so much as it was being over-run by *rats* that had accompanied the new arrivals on their exploratory voyage from Polynesia. Recent evidence, however, offers that Easter Islanders understood fish fertilizer use and didn't commit ecocide[101].

Either way (or both, perhaps), there is little to convince us of much "high strangeness" other than the inward-looking faces of the 70-ton sculptures.

Although there has been some supposition of vague "energy vortexes[102]" due to placement of the "faces" there's little hard science to back up the claim.

Worse, because this is such a backwater (if you'll pardon the term!) part of the Pacific Ocean, we have few missing ships and planes to report.

Still, the physical location of Easter Island begins to waft a familiar cattle feedlot smell since the island is nowhere near the 19.5-degree placement the vortex panderers promote. Hana Roa (its alternate name) sits at 27°7′S 109°22′W. That's a miss of 911.8 km or 566-miles.

Our crackpot theory to the rescue!

There IS something out there where a *possible* vortex *might* be. Except that unlike the Bahamian Islands, the Marianas, or even the New Caledonia area, the energy vortices may be missing (with a 566-mile 'gimme') because our new theory suggests the area being subducted lies to the *west* not the *east*.

As the land mass of South America rises on the Nazca Plate (pressing it down and pushing up the Andes Mountains inland) our odd “energy theory” says any anomaly would likely be located inland in Peru. About 30-miles inland.

Admittedly, the Plains of Nazca are only about 14.71-degrees south of the equator, but at 532 kilometers (330-miles), not only is the Plain of Nazca on what our theory suggests would be the “right” side of subduction (the rising side) for Piezo effects, but there is HUGE evidence spread out in the form of drawings *visible only from the air*[103] that this location is no stranger to anomalies.

This is the high-level view of the Bermuda Triangle data and related global allegations.

Now, before we look at the case of Bruce Gernon, who may be the only credible eyewitness ever to “travel the anomaly,” we have one more area to cover in order that you can understand the topic at hand.

8. A Quick Course in "Earth Electricity"

[**High-level:** With so many fascinating reports that hint at an "earth force" of some kind, perhaps we need to sit back and review some of the science involved. What are those forces and how might they operate?]

This is where we get into the interesting stuff because it may have a very direct bearing on the existence of *Dimensions Next Door*.

There are three distinct aspects to "Earth Electricity" than we need to explore.

Let's begin with the Piezo electric effects referred to earlier. Remember, this is the phenomenon that likely relates to at least *some* of the unexplained disappearances that occur near magnetic disturbances.

Since we're dealing here with electricity, this is as good a time as any to explain why the effects are generally reported on the *dry land side* of subduction zones.

The answer is simple: Salt water is an excellent conductor of electricity! No wonder it would be unexpected to see millions of volts and perhaps as many amps of current appear where absorption (conduction back to Earth) would be instantaneous.

On the *dry* side of a subduction area, there is a high likelihood of phenomena.

The word "piezo" is a historical migration from the Greek base *piezein*. It was documented (1880) by Marie Curie utilizing fragments of quartz.

The term piezo-electric simply means that a substance either a) puts off energy of b) absorbs energy when an electrical current is either applied or measured.

Let me give you a couple of examples:

In the early days of radio, transmitters used the single frequency vibration characteristics of specially cut quartz crystals to ensure that a transmitter's frequency was stable.

The backstory here is that the earliest transmitters were made by resonating a sparking gap. When such a device is used to drive a transmitter, the resultant

signal is extremely *impure*. Raspy ugly. Spectral analysis of such a signal would make your hair stand on end. Instead of a clean note (or *whistle*) back in the times of not-very-selective regenerative receivers, you would have a fairly *wide* spectrum – several to 10's of kilohertz in width – over which the obnoxious sound could be heard.

The spectral purity of ancient radio transmitters changed dramatically when small quartz crystals were loosely coupled to a low power type oscillator circuit. Invented by Walter Cady[104] in 1921. When properly set up, the signals became incredibly clear and clean. Just what the doctor (and later the Federal Radio Bureau, forerunner of the modern FCC) ordered. But a court challenge to Federal authority to "license the airwaves" resulted in what was called the "Summer of Anarchy" pending the revised Radio Act of 1927.

Like social media today – just nuts.

Wide signals were to have their place, but only with voice modulation. Carriers were to be clear and clean ever-after. The crystals prevented signals from "drifting" in frequency and that brought order to the radio spectrum. Hartley, Colpitts[105] and Pierce pushed the technology along.

The Piezo effect involved in an oscillator is very, very small. Yet, properly designed, even a small crystal could control a modest 25 to 50-watt class single-tube transmitter.

Pressed for too much output and the crystals would heat – and eventually break.

The other place where crystals had important use was in microphones. While shaving down quartz into suitable sizes was not particularly easy, with the advent of modern ceramics, the ceramic microphone came of age, though old-time radio operators continued to call them "crystal mics."

Fast-forward to the present and a new application of Piezo electricity in coming into its own: the MEMS applications. Short for Micro Electric Mechanical Systems, the art here is to take otherwise wasted energy and utilize it for things like cell phone charging or energy recovery in industrial settings. Anywhere you have vibrations, you have the potential to "harvest" Piezo energy. In small devices, please note that voltages in the 2-10-volt range are not uncommon[106] but current is limited.

This is a last “key in the lock” to understanding the huge potential of Earth’s electricity when huge areas of rock are twisted and pressured by seismic-level power.

Our second phenomena to consider is *acoustical* in nature.

In Bangladesh, the “Bariusal Guns” are heard in mountainous areas.

In Italy, it’s the “brontidi,” “balza,” or “lagoni.”

Japanese refer to these acoustical “cries from the sea” as *unimari*.

In the Philippines (adjacent to yet-another subduction area!) we read of the “retumbos”.

The name of such effects in the United States depends where you are standing. Cayuga or “Seneca Guns” are common in the Northeast, but other times they can be “Moodus” noises in the lower Connecticut Valley and elsewhere – like on the west coast near *another* dry land side of subduction they are “fog guns” and sometimes “mistpouffers.”

The Wikipedia entry on this is impressive[107]:

> “They have been reported from: on an Adriatic island in 1824; Western Australia, South Australia & Victoria in Australia; Belgium; frequently on calm summer days in the Bay of Fundy, Canada; Lough Neagh in Northern Ireland; Scotland; Passamaquoddy Bay, New Brunswick & Cedar Keys, Florida & Franklinville, New York in 1896 & in northern Georgia in the United States.
>
> Their sound has been described as like distant but inordinately loud thunder while no clouds are in the sky large enough to generate lightning. Those familiar with the sound of cannon fire say the sound is nearly identical. The booms occasionally cause shock waves that rattle plates. Early white settlers in North America were told by the native Haudenosaunee Iroquois that the booms were the sound of the Great Spirit continuing his work of shaping the earth.
>
> The terms "mistpouffers" and "Seneca guns" both originate in Seneca Lake, NY, and refer to the rumble of artillery fire. James Fennimore Cooper, author of The Last of the Mohicans, wrote "The Lake Gun" in

1850, a short story describing the phenomenon heard at Seneca Lake, which seems to have popularized the term."

If I had to make one suggestion for further reading on this, it would be a document located on the Federation of American Scientists website[108]. It's a book originally published by MITRE, Corp. that operates FFRDC's - federally funded research and development centers for an Uncle named Sam.

The Abstract describing the work really grabs your attention:

"**ABSTRACT**

Approximately two-thirds of 594 separate unusual noise events reports along the east coast of Canada and the United States in the period December 2, 1977, to May 31, 1978 can be attributed to the operation of supersonic aircraft. Most of the remaining 181 events are believed to have a natural origin. This conclusion is in accord with thousands of historical accounts of booms not associated with thunderstorms and related weather activity. The historical association of some booms with earthquakes suggest that the booms may result from disturbances in the earth's crust leading to explosive relates of gases some of which may be combustible. In many case, for example the Ramapo fault earthquake of June 20, 1978, the sounds precede the earthquake shock by seconds. In other cases, booms are heard for long periods prior to an earthquake, while other booms show no clear relations to observed earthquakes…."

When we read Bruce Gernon's story of flying through an "electronic fog" in the Bermuda Triangle, another source of anomalous sounds comes to mind.

Could they be a side effect of electronic fog and the development of high-speed time-space anomalies?

Another fine area of discussion is the large amount of current traveling through the earth as Telluric Currents. The Wikipedia entry is useful and simplified[109] :

Telluric currents are phenomena observed in the Earth's crust and mantle. In September 1862, an experiment to specifically address Earth currents was carried out in the Munich Alps (Lamont, 1862). Including

> minor processes, there are at least thirty-two different mechanisms which cause telluric currents. The strongest are primarily geomagnetically induced currents, which are induced by changes in the outer part of the Earth's magnetic field, which are usually caused by interactions between the solar wind and the magnetosphere or solar radiation effects on the ionosphere. Telluric currents flow in the surface layers of the earth. The electric potential on the Earth's surface can be measured at different points, enabling the calculation of the magnitudes and directions of the telluric currents and hence the Earth's conductance. These currents are known to have diurnal characteristics wherein the general direction of flow is towards the sun. Telluric currents continuously move between the sunlit and shadowed sides of the earth, toward the equator on the side of the earth facing the sun (that is, during the day), and toward the poles on the night side of the planet.
>
> Both telluric and magnetotelluric methods are used for exploring the structure beneath the Earth's surface (such as in industrial prospecting). For mineral exploration the targets are any subsurface structure with a distinguishable resistance in comparison to its surroundings. Uses include geothermal exploration, mining exploration, petroleum exploration, mapping of fault zones, ground water exploration and monitoring, investigation of magma chambers, and investigation of boundaries of tectonic plates. Earth batteries tap a useful low voltage current from Telluric currents, and were used for telegraph systems as far back as the 1840s.
>
> In industrial prospecting activity that uses the telluric current method, electrodes are properly located on the ground to sense the voltage difference between locations caused by the oscillatory telluric currents.”

While it would have been convenient for the Naval Research Labs to attribute all such noises to aircraft operations, it was eventually concluded by the MITRE work that the 30% “natural sources” was *not* aircraft or other man-sourced events.

There’s no shortage of potential energy to cause earthquake clouds, Seneca Guns, Moodus or odd electricity in the ground.

Perhaps with some special mix of these energies, Nature herself is holding new discoveries just waiting to be made.

Let’s go *time traveling* and collect some more data.

9. Bruce Gernon's Flight Through "Electronic Fog"

[**High-level:** While many reports related to "earth electrics" are either hopelessly difficult to instrument, or the effects quickly fade into a slime of modern mythology, what if we could find a case of a well-documented case where enough facts to allow application of *scientific method* could be applied? Here's the case:]

If this were a college course, and a "required reading list" offered, we would make the Rob MacGregor and Bruce Gernon book "*The Fog: A Never Before Published Theory of the Bermuda Triangle*" the required reading for this chapter.

The 2005 book is available from Amazon.com[110] as well as a second Gernon and MacGregor collaboration "*Beyond the Bermuda Triangle: True Encounters with Electronic Fog, Missing Aircraft, and Time Warps*[111]."

Both books offer details about Bruce Gernon's 1970 first encounter with electronic fog and a "time warp" over the Bermuda Triangle. In the second book, a more detailed review of other disappearances is presented with many more cases.

For the purposes of this chapter, however, we are not so much interested in looking at the broad spectrum of events – that Gernon and MacGregor have done a masterful job of collecting.

Nor are we interested in retelling the details of Gernon's flight, with one exception: We are keenly interested in *the electronic aspects* of the Gernon flight because our thesis in this book is that there is a wide assortment of scientific breakthroughs nearly at hand, lacking only a more methodical approach to unlock mysteries like dimensional travel, including time travel, as well as journeys to the "lands of the dead" as well as lesser effects, such as mastery of anti-gravities.

I know this sounds like a tall order, but in each of the chapters to follow, we will focus pure on the physical reports that have been recorded and rip into those looking for "electronic connective tissue."

With this framework (electronic detective work) in mind, let me recap the pertinent points of Bruce Gernon's experience.

On the afternoon of December 4, 1970, Bruce Gernon and two associates, took off from Adros Town airport in the Bahamas at about 3 PM, or shortly thereafter.

The aircraft involved was a Beechcraft A36 that carried the registration number N4146A.

The operating specifications of the A36 are quite solid: 3,600 pounds maximum gross takeoff weight, a 285-horsepower engine, a cruise speed of 168 knots (over 193 MPH) and a top speed of 179 knots (over 206 MPH)[112].

As equipped from the factory, the ceiling of the aircraft is listed as 16,600 feet. However, remember that factory specs on Beech products are likely at close to maximum takeoff weights. Since Gernon's flight had only three people aboard, we can calculate that the aircraft's likely takeoff weight (with full fuel at 74 gallons/ 444 pounds) around 3,180-3,250 pounds.

Therefore, the A36 was able to operate over 16,600 feet when well under gross takeoff weight. It likely could "fly a bit faster than book."

The A36 also has "long legs" able to travel 697 nautical miles or 802 statute miles. It's an ideal aircraft for flying the Bahamas. With lots of speed, its only drawback is a landing roll of 1,140 feet, but even so, that's less than half the length of even short airports.

The Andros Town Airport referred to in *The Fog* carries the designator MYAF and is also called the "Fresh Creek" airport. It is 27.3 miles southwest of the Nassau Variable Omnirange Radio (VOR) which is on 112.7 MHz. Gernon doubtless had his com radio tuned to 122.8 – which is the common traffic advisory frequency – used by aircraft to communicate their intentions at uncontrolled (towerless) airports – which Andros still is. It's not a long field (4,362 feet) but it runs east-west and it's likely Gernon took off to the east, as that's where prevailing winds would be from in the afternoon.

If you were flight planning today in an A36, you'd see the direct path to West Palm Beach is 172.2 miles. Even though this looks like an hour flight, you'd never plan it that way in a single-engine aircraft. Instead, the more cautious

route would be to head more westerly and plan to make landfall in the Miami area, or just north of there and then work up the coast to West Palm Beach.

This would add time, but improve safety. It might add 20-minutes to the flight flying two sides of a triangle, rather than the hypotenuse, but water landings are something to be avoided at all costs.

There is some additional time to consider, as well, in flight planning. For example, you can add 20-minutes to any such flight plan. That's because while climbing, aircraft trade speed-over-ground for altitude. On the arrival end, when entering a congested air traffic area like West Palm Beach, speed comes down and there is maneuvering to fit in with other traffic in accordance with that the approach controllers, and then in the hand-off sequence, what the local tower wants traffic to do.

In *The Fog*, Gernon mentions that his ADF (automatic [radio] direction finder), was tuned to Bimini Radio. Known as ZBB, this beacon is on 24-hours a day and is operated by the U.S. F.A.A. on 396 KHz.

The Bonanza reportedly had redundant Bendix-King NavCom sets; either KXC-170b or the later KX-175 series. These are nearly identical radios with minor circuitry differences.

With one radio likely on the 122.8 Andros traffic at departure, Gernon then contacted Miami Flight Services. It seems likely he did so on the Nassau remote flight services link. The Aircraft Owners and Pilots Association (AOPA) guidance for the region notes that "*U.S. Flight Service Station Frequency of 118.4 is remoted at Nassau, 126.9 East of Freeport and 126.7 at Bimini*[113]."

The next point of interest is that on departure, the 1970 Gernon flight passed close abeam AUTEC, the Atlantic Undersea Test Evaluation Center. This facility, located on Andros is of interest because of their electronics infrastructure.

According to the Wikipedia entry on AUTEC:

> "The area chosen for AUTEC was the Tongue of the Ocean (TOTO) located between the islands of Andros, New Providence, and Exuma Sound in the Bahamas. Chosen because of its ideal natural

characteristics, and its climate which permits year-round operations, the TOTO is a U-shaped, relatively flat-bottomed trench approximately 20 miles (32 km) wide by 150 miles (240 km) long with a depth which varies gradually from 3,600 feet (1,100 m) in the south to 6,600 feet (2,000 m) in the north. Its only exposure to the open ocean is at the northern end, and except for this ocean opening, the TOTO is surrounded by numerous islands, reefs, and shoals which make a peripheral shelter isolating it from ocean disturbances, particularly high ambient noise which degrades undersea tests and evaluations.

A joint United States/United Kingdom Agreement signed in 1963 with the concurrence of the Bahamian Government, enabled the United States to develop this area of water and certain territory on the east coast of Andros Island, readily accessible to the TOTO, and there install equipment to build three offshore test ranges. Under this agreement, the Royal Navy has equal access to the test facility[114]."

It is also quite significant, I believe, to note the start-up date of AUTEC:

"On 26 February 1967, AUTEC was commissioned at West Palm Beach when Admiral E. J. Fahy, Commander, Naval Ship Systems Command, presented Captain Jackson with orders making him the first Commanding Officer, and AUTEC became an operational field activity. In May 1967, headquarters personnel moved from Orlando to West Palm Beach and established offices at the Palm Beach International Airport in the building which was formerly the Airport Terminal. In July 1967 at a Change of Command ceremony on Andros Island, Commander Barney was relieved by the new Officer-in-Charge, Andros Ranges, Commander Frank A. Smith."

In the MacGregor/Gernon book, there is a key passage to remember:

"*Gernon looked over to the terminal where he saw his friend, John Woodbright, waving to him. Woodbright was a mathematician at the Atlantic Undersea Test Evaluation Center…"*

In one theory that will be developed as our research unfolds, the Gernon flight *should* have a moderate-power microwave energy device involved somewhere in the story. Ideally, it would operate in the 400-1,000 MHz

range. Yet, in my private emails with Gernon researching this book, there was only one source aboard his aircraft that would have operated in the expected spectrum.

That was his air traffic control transponder in the A36. These units, however, are not at the top of our “suspect list” as time-warp causing RF sources because they are only periodic transmitters. In other words, when “pinged” by the F.A.A. regional radars, they respond with an aircraft identification code.

Gernon reported that his transponder was “squawking” 1200 – the standard VFR (visual flight rules) code, indicating that his flight was not operating under air traffic control for directional vectors and altitude assignments.

Suspected Phenomenon #1: AUTEC/SAGE Radar

The lack of a suitable RF source circles back to AUTEC operations: AUTEC did have *exactly* what my theory would predict: Moderate to high power radio frequency sources near the reported space-warp event documented by Gernon:

> [At AUTEC] "In-air tracking is provided by radars and various other in-air tracking systems such as LATR, the Hyperbolic In-Air Tracking System (HITS), and Differential GPS (DGPS). These in-air systems cover the AUTEC Weapons Range up to a distance of 500 nautical miles (930 km) from Site 1 and a height of 70,000 feet (21,000 m). Surveillance radars operate to support air and surface safety.[115]"

We eye the role of "surveillance" radars with some suspicion.

It is important to know a fair bit about radar. My personal experience is from my employment for RCA Services Company in Alaska in 1968. Stationed by Murphy Dome Aircraft Control and Warning station, I was responsible for a secure communications network. In addition to some knowledge of the radars on site, my expertise was in operation and maintenance the Philco (CLR-8 and CLR-9 microwave transceivers) and Lenkurt (type 45 and 46) frequency-division multiplexing systems.

The AUTEC site in this period was likely housing a long-range high-power acquisition radar. However, the frequency diversity AN/FPS-35 Radar is not listed as being installed at AUTEC in official deployment data[116]. Moreover, the AN/FPS-24 is a less likely candidate, as well, since it operated in the 214-236 MHz range, and as a result, the size of the required antenna in the G.E.-engineered system was huge. 85.5 tons is a *lot* of metal to swing around.

On the other hand, the highest suspect device on our this of candidates that *could* perhaps inadvertently caused the events Gernon experiences is called the EWTS – electronic warfare test system.

It is publicly reported that "The system consists of a radar simulator, pedestal and controller, antennas, high-power amplifiers, calibration equipment, and an operator workstation. The system is housed in an air-conditioned radome and located on a 74-foot (23 m) tower[117]."

This is precisely the kind of equipment that MIGHT in some strange configuration perhaps unknown to AUTEC scientists, interoperate with other electromagnetic conditions to cause unexpected reports.

Northrup-Grumman, meanwhile, has continued to update the EWTS at AUTEC even through present-time. A 2010 press release, for example, states:

> "BUFFALO, N.Y., Oct. 7, 2010 -- Northrop Grumman Corporation (NYSE:NOC) has been selected as the preferred supplier for the Atlantic Undersea Test and Evaluation Center's (AUTEC) Electronic Warfare Simulator Enhancement (EWSE) Program.
>
> Under the terms of the contract, Northrop Grumman's Buffalo, N.Y.-based Amherst Systems business unit will provide an upgrade to the existing Electronic Warfare Threat Simulator (EWTS) located at Andros Island, Bahamas. AUTEC's EWTS system is capable of illuminating air, surface and submarine platforms in complex scenarios on the instrumented tracking range at Andros Island. EWTS is a real-time system that generates complex, dynamic, electromagnetic signal environments at the radio frequency (RF) level. With this system, AUTEC has the capability to test different platform receivers in an open-air, over-the-water range environment[118]."

With this background, I think there's enough data piling up to table Suspected Phenomenon #1. This *might* explain why Bruce Gernon, and others, have likely experienced very real-time *travel anomalies*.

Further, based on electronic infrastructure down-range from Cape Canaveral, coupled with the evolution and deployment of advanced SAGE radar and derivatives, we can begin to make out a path from Gernon's run-in with a warp in space-time to other widely-reported phenomena including the Montauk Project.

From there, it is only a short hop to the long-rumored Philadelphia experiment.

More currently, the data suggests an explanation why the U.S. and foreign governments have had such an incredible interest in the general subject of Tesla-like atmospheric heaters. The largest of these is the University of

Alaska's High Altitude Auroral Research Program (HAARP) at Gakona, Alaska which continues through various offshoots, even today.

We would also point a spectrum analyzer in the direction of Russia in this period because of their "Duga Radars." Called "The Russian Woodpeckers" by frustrated ham radio enthusiasts worldwide, we found this entry in Wikipedia somewhat ironic: "Two operational Duga radars were deployed, one near Chernobyl and Chernihiv in the Ukrainian SSR (present-day Ukraine), the other in eastern Siberia[119]."

Once again, military application and use of the radio spectrum and lots of "unintended consequences."

While the Duga radar was (most likely) a crude high frequency radio-based over-the-horizon (OTH) radar, there were other suggestions:

> "The Duga systems were extremely powerful, over 10 MW in some cases, and broadcast in the shortwave radio bands. They appeared without warning, sounding like a sharp, repetitive tapping noise at 10 Hz, [1] which led to it being nicknamed by shortwave listeners the Russian Woodpecker. The random frequency hops disrupted legitimate broadcasts, amateur radio operations, oceanic commercial aviation communications, utility transmissions, and resulted in thousands of complaints by many countries worldwide. The signal became such a nuisance that some receivers such as amateur radios and televisions began including 'Woodpecker Blinkers' in their circuit designs to filter out the interference.
>
> The unclaimed signal was a source for much speculation, giving rise to theories such as Soviet mind control and weather control experiments. However, because of its distinctive transmission pattern, many experts and amateur radio hobbyists quickly realized it to be an over-the-horizon radar system. NATO military intelligence had already given it the reporting name STEEL WORK or STEEL YARD. While the amateur radio community was aware of the system, this theory was not publicly confirmed until after the fall of the Soviet Union.[120]"

It seems almost too coincidental that the Russian OTH was not only *in operation* at the time of the Chernobyl nuclear disaster, but that it continued

to operate almost 3 ½-years after the disaster, despite being inside the Chernobyl Exclusion Zone.

What was so important?

Suspected Phenomenon #2: RF-Triggered Piezo Effects

While Bruce Gernon's run-in with the space-time storm may be effectively the result of interaction of radio frequency spectrum interference waves – ripping the fabric of space-time – there is another possibility that relates to our Piezo-electricity discussion in the previous chapter on the Bermuda Triangle.

Since 1983, scientists have been studying a phenomenon called the "Hessdalen Lights" in a rural valley in central Norway.

> "The Hessdalen lights are of unknown origin. They appear at day and night, and seem to float through and above the valley. They are usually bright white, yellow, or red and can appear above and below the horizon. Duration of the phenomenon may be a few seconds to well over an hour. Sometimes the lights move with enormous speed; at other times they seem to sway slowly back and forth. On yet other occasions, they hover in mid-air. Some hypothesize that the light is ionized iron dust.
>
> Unusual lights have been reported in the region since at least the 1930s.Especially high activity occurred between December 1981 and mid-1984, in which period the lights were being observed 15–20 times per week, attracting many overnight tourists who arrived in for a sighting. As of 2010, the number of observations has dwindled, with only 10 to 20 sightings made yearly[121].

The reason to mention these lights is that they may be a Piezo-electric effect that is not specifically tied to earthquake activity, more just the gentle twisting of ground and induced highly charged areas at certain altitudes.

Since the Gernon flight occurred in December of 1970, the observations we laid out in the previous chapter presenting a potential link between disappearances and Piezo-electric effects, might still be related to earthquake activity: Please notice that the San Fernando Earthquake in California appeared at the *opposite side of the North American* tectonic plate, on February 9, 1971[122] .

That would be the wrong end of the plate, but inside the predicted timeframe.

10. Philadelphia Experiments: Three ship Monte

[**High-level:** With Bruce Gernon's report in hand, would it be productive to re-explore older stories of anomalies in time and space-time? What if we could begin to pull together some *common elements* between such events? It would be easier if there weren't *three ships* involved in the purported *Philadelphia Experiment*.]

We are down to a few short chapters before we will have gathered enough data to make an intelligent "dart throw" to see what our quickly-growing piles of data maybe telling us.

This next "bump in the data" which is more like a "*thorn in the paw*" of mainstream science, is more difficult to analyze since we don't have *direct* access to the original sources.

The basic outline of the [alleged] facts as presented in Wikipedia go like this:

> "The Philadelphia Experiment is an alleged military experiment supposed to have been carried out by the U.S. Navy at the Philadelphia Naval Shipyard in Philadelphia, Pennsylvania, sometime around October 28, 1943. The U.S. Navy destroyer escort USS Eldridge (DE-173) was claimed to have been rendered invisible (or "cloaked") to enemy devices.
>
> The story first appeared in 1955, in letters of unknown origin sent to a writer and astronomer, Morris K. Jessup. It is widely understood to be a hoax; the U.S. Navy maintains that no such experiment was ever conducted, that the alleged details of the story contradict well-established facts about USS Eldridge, and that the claims do not conform to known physical laws.[123]"

What makes the story so *intriguing* to our present research is that much of the phenomena reported in the original William Moore and Charles Berlitz book on the subject, "The Philadelphia Experiment: Project Invisibility: The Startling Account of a Ship that Vanished-and Returned to Damn Those Who Knew Why...[124]" describes many of the same *electromagnetic features* described by Bruce Gernon.

Still, reception of the book was initially chilly. As the Bill Moore Wikipedia page reported:

> "According to author Barna William Donovan, The Philadelphia Experiment - Project Invisibility was "largely dismissed even by the most committed conspiracy and supernatural buffs as nothing more than a shoddy, uncritical repeat of a lingering and completely unsubstantiated urban myth." Donovan wrote that critics have deemed The Roswell Incident "a collection of wild hearsay" offering "second - and third-hand accounts Berlitz and Moore then use for fantastic speculation and to jump to a lot of unwarranted conclusions", and that when critics and skeptics characterized the Majestic 12 documents as fraudulent, "The accusing fingers were pointing at Moore.[125]"

How much truth lies buried in the Philadelphia Experiment reports is a matter of great discernment.

To put the problem how much was "real?" in the Px reports, we need to find a summary of where aircraft and ship stealth technology was during this period. One of the best I found, encapsulating known data, offered this:

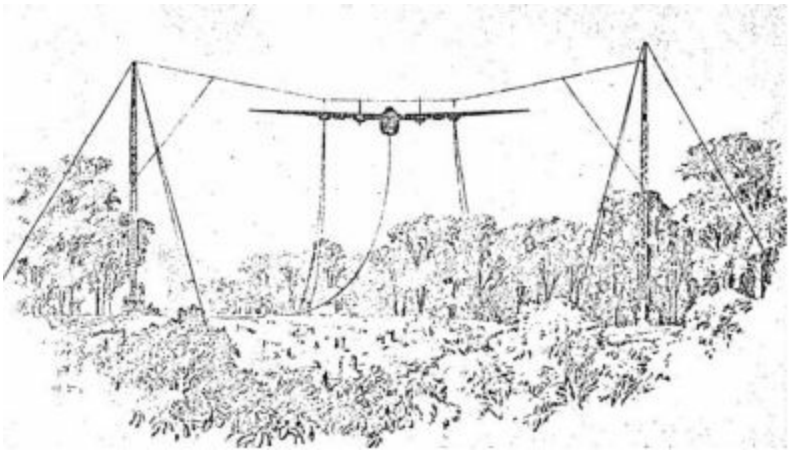
> "During the WWII era, German submarines were a major threat to merchant marine shipping off the East Coast of the United States. Anti-submarine patrol aircrafts were manufactured and planned to counter this threat. However, surfaced submarines could easily detect attacking anti-submarine patrol aircraft visually at long ranges and escaped by diving. Project Yehudi aimed to reduce the visual detection range by decreasing the contrast between the aircraft and the sky. Engineers fitted some patrol and attack aircraft with rows of lights, spaced at a distance of 0.5 to 0.6 meters along their edges and around the forward fuselage. The intent was to reduce the visual detection range of the aircraft and increase the chance of detecting submarines on the surface. Tests proved that the Yehudi system lowered the visual acquisition range from twelve to two miles. However, during this time, radar systems to track submarines became available. Diving and escaping, after visual detection of these aircraft no longer gave the operational advantage to the submarine. Using these radar systems, which were installed on aircraft, enabled their users to find and track

submarines for bombing missions. Thus, there was no need to equip aircraft with Yehudi lights for submarine operations and further, it was costly to deploy aircraft with them.

In a similar project during the Vietnam War, Compass Ghost, shown in Figure 25, an F-4 Phantom was modified to reduce its visual detection by enemy aircraft, such as the smaller MIG-21. The F-4 had nine high-intensity lamps on the wings and body with a blue-and-white color scheme which helped reduce detection range by nearly 30 percent.[126]"

Thus, the data seem to suggest that in the early 1940's, the US military services were looking for means and methods to reduce not only the radar signatures of aircraft, but they were looking at other *novel lighting schemes* as well.

But the development of the basic Yehudi lights was simple: String up a forward profile cutout of a bomber, suspend it between a couple of tall poles, and then turn on lights on the cutout at various intensities. Like this:



Obviously, if you are looking for a "black dot" on either the horizon of the sea or in the skies, if the target you're seeking was emitting *light*, it would present a much smaller contrast profile and would, thus, be harder to see. The technology worked.

Was the Philadelphia Experiment Early Stealth Technology?

This same source reveals more about the historical basis of stealth technologies:

> "After its invention, radar became the most accurate method for detection of aircraft, and countries developed new tactics and projects to defeat it and hence increase survivability. Bomber Command's de Havilland Mosquitos had the lowest loss rate of any WWII bomber. This was attributable to its high speed, high altitude and to some extent its low radar reflectivity, a result of the bomber's wooden sandwich construction. Germany's Horten HoIX V2 design achieved lower detectability by a combination of its external shape and the use of integral radar absorbent materials (RAM).[127]"

What's also remarkable is how close the Germans came to evolving stealth technology to what could have been a game-changer in WW II. Once you understand the concept of Radar Cross-Section (RCS), a reading of the Horten IX's history reveals how close they came:

> "…it is certain that there were many ingenious design specifications of the Horten brothers' 0.92 Mach, 620 nm., combat-radius, 1930s' bomber that would inform subsequent low observables' design priorities. Radical flying-wing airframes with no vertical surfaces, extensions of trailing edges, solid plywood wing skins, steel engines and steel-tube substructures concealed under the absorbent skin of the fuselage and engine exhausts on top of the wing were some of these specifications. Although designed and tested, it never flew operationally. The HO-IX V2 was the only powered aircraft to fly and it was destroyed during testing. The HO-IX V3 was completed but never flew. However, when the prototypes and design schemes were captured by U.S. Forces in 1945, it was discovered that future production aircraft would have a wood/plastic laminate structure and "…sandwich skin with a material derived from charcoal, sawdust and glue matrix (early RAM) to be used in the core to absorb radar energy.[128]"

One more important consideration historically is the role of shipboard radars

at the time of the purported Philadelphia Experiment.

During the prewar period, up through 1942 to early 1943, shipboard radars were large and operating on very low frequencies. The two most often cited were 176 MHz and 214 MHz in the Very High Frequency (VHF) radio spectrum[129].

However, in 1943, the sudden emergence of 3 GHz radar was made possible by a breakthrough in vacuum tube technology. The invention of the "cavity magnetron" which was rapidly advanced in England:

> "An early form of magnetron was invented by H. Gerdien in 1910. Another form of magnetron tube, the split-anode magnetron, was invented by Albert Hull in 1920, but it wasn't capable of high frequencies and was of little use. Similar devices were experimented with by many teams through the 1920s and 1930s. On November 27, 1935, Hans Erich Hollmann applied for a patent for the first multiple-cavity magnetron, which he received on July 12, 1938, but the more stable klystron was preferred for most German radars during World War II. The cavity magnetron tube was significantly improved by John Randall and Harry Boot in 1940 at the University of Birmingham, England. The high power of pulses from their device made centimeter-band radar practical for the Allies of World War II, with shorter wavelength radars allowing detection of smaller objects from smaller antennas. The compact cavity magnetron tube drastically reduced the size of radar sets so that they could be more easily installed in night-fighter aircraft, anti-submarine aircraft and escort ships[130]"

And yes, one of those "escort ships" might well have been the U.S.S. Eldridge if stories are to be believed. But those are stories, not *data*.

Hence, we are left with one of those difficult to prove, one way or the other, analytics problems.

When we look at *the data* in the Philadelphia (and other) Naval Yards, two new technologies were being evaluated. This included the shipboard version of "Yehudi lights" which might have a stealth application. It is also a near certainty that at least some level of radar upgrade was likely in progress since cavity magnetrons were rushed into both airborne and at-sea applications

from 1943 on.

It is obvious, then, that “yard scuttlebutt” could refer to “invisibility” (Yehudi) as well as exotic radar (the first 3 GHz magnetron-based units).

The U.S. Navy, for its part, has maintained the whole affair is the equivalent of a modern myth. In fact, the Naval History and Heritage Command has a website devoted to debunking the case that offers this:

> “The ship involved in the experiment was supposedly the *USS Eldridge*. The Archives has reviewed the deck log and war diary from *Eldridge's* commissioning on 27 August 1943 at the New York Navy Yard through December 1943. The following description of *Eldridge's* activities are summarized from the ship's war diary. After commissioning, *Eldridge* remained in New York and in the Long Island Sound until 16 September when it sailed to Bermuda. From 18 September, the ship was near Bermuda undergoing training and sea trials until 15 October when *Eldridge* left in a convoy for New York where the convoy entered on 18 October. *Eldridge* remained in New York harbor until 1 November when it was part of the escort for Convoy UGS-23 (New York Section). On 2 November the convoy entered Naval Operating Base, Norfolk. On 3 November, *Eldridge* and Convoy UGS-23 left for Casablanca where it arrived on 22 November. On 29 November, *Eldridge* left as one of escorts for Convoy GUS-22 and arrived with the convoy on 17 December at New York harbor. *Eldridge* remained in New York on availability training and in Block Island Sound until 31 December when it steamed to Norfolk with four other ships. During this time frame, *Eldridge* was never in Philadelphia. [131]”

The book (and others) have alleged that another ship saw the Eldredge reappear from (wherever it was). But, again the Navy documents throw cold water on the subject:

> “Supposedly, the crew of the civilian merchant ship *SS Andrew Furuseth* observed the arrival via teleportation of the *Eldridge* into the Norfolk area. *Andrew Furuseth's* movement report cards are in the Tenth Fleet records in the custody of the Modern Military Branch,

> National Archives and Records Administration, (8601 Adelphi Road, College Park, MD 20740-6001), which also has custody of the action reports, war diaries and deck logs of all World War II Navy ships, including *Eldridge*. The movement report cards list the merchant ship's ports of call, the dates of the visit, and convoy designation, if any. The movement report card shows that *Andrew Furuseth* left Norfolk with Convoy UGS-15 on 16 August 1943 and arrived at Casablanca on 2 September. The ship left Casablanca on 19 September and arrived off Cape Henry on 4 October. *Andrew Furuseth* left Norfolk with Convoy UGS-22 on 25 October and arrived at Oran on 12 November. The ship remained in the Mediterranean until it returned with Convoy GUS-25 to Hampton Roads on 17 January 1944. The Archives has a letter from Lieutenant Junior Grade William S. Dodge, USNR, (Ret.), the Master of *Andrew Furuseth* in 1943, categorically denying that he or his crew observed any unusual event while in Norfolk. *Eldridge* and *Andrew Furuseth* were not even in Norfolk at the same time.[132]"

Still, there is a case to be made that the Navy would cover-up any serious investigations and the events referred to as occurring in "Philadelphia" might well have happened offshore.

Notwithstanding, the Office of Naval Research has issued the following statement on alleged events of the period:

> "Over the years, the Navy has received innumerable queries about the so-called "Philadelphia Experiment" or "Project" and the alleged role of the Office of Naval Research (ONR) in it. The majority of these inquiries are directed to the Office of Naval Research or to the Fourth Naval District in Philadelphia. The frequency of these queries predictably intensifies each time the experiment is mentioned by the popular press, often in a science fiction book.
>
> The genesis of the Philadelphia Experiment myth dates back to 1955 with the publication of The Case for UFO's by the late Morris K. Jessup.
>
> Sometime after the publication of the book, Jessup received correspondence from a Carlos Miquel Allende, who gave his address as

R.D. #1, Box 223, New Kensington, Pa. In his correspondence, Allende commented on Jessup's book and gave details of an alleged secret naval experiment conducted by the Navy in Philadelphia in 1943. During the experiment, according to Allende, a ship was rendered invisible and teleported to and from Norfolk in a few minutes, with some terrible after-effects for crew members. Supposedly, this incredible feat was accomplished by applying Einstein's "unified field" theory. Allende claimed that he had witnessed the experiment from another ship and that the incident was reported in a Philadelphia newspaper. The identity of the newspaper has never been established. Similarly, the identity of Allende is unknown, and no information exists on his present address.

In 1956, a copy of Jessup's book was mailed anonymously to ONR. The pages of the book were interspersed with hand-written comments which alleged a knowledge of UFO's, their means of motion, the culture and ethos of the beings occupying these UFO's, described in pseudo-scientific and incoherent terms.

Two officers, then assigned to ONR, took a personal interest in the book and showed it to Jessup. Jessup concluded that the writer of those comments on his book was the same person who had written him about the Philadelphia Experiment. These two officers personally had the book retyped and arranged for the reprint, in typewritten form, of 25 copies. The officers and their personal belongings have left ONR many years ago, and ONR does not have a file copy of the annotated book.

Personnel at the Fourth Naval District believe that the questions surrounding the so-called "Philadelphia Experiment" arise from quite routine research which occurred during World War II at the Philadelphia Naval Shipyard. Until recently, it was believed that the foundation for the apocryphal stories arose from degaussing experiments which have the effect of making a ship undetectable or "invisible" to magnetic mines. Another likely genesis of the bizarre stories about levitation, teleportation and effects on human crew members might be attributed to experiments with the generating plant of a destroyer, the USS Timmerman. In the 1950's this ship was part of an experiment to test the effects of a small, high-frequency generator

> providing 1,000 Hz instead of the standard 400 Hz. The higher frequency generator produced corona discharges, and other well-known phenomena associated with high frequency generators. None of the crew suffered effects from the experiment."

This is, in my view, an exceptionally misleading representation by the Navy.

As you should be tracking as we dig deeper into the data, there is a fascinating collection of "electronica" stated in relation to the alleged Philadelphia Experiment(s).

The U.S. Navy admits here that was a high-powered generation equipment of some kind involved. Two reasons for believing this are apparent. First is that de-gaussing was commonly done on ships during the latter part of the war to make them less likely to set off magnetically triggered mines.

The second reason to look at "generators" is the experiments done on the USS Timmerman involving higher-frequency alternating mains current. While there is much more involved under analysis, it's notable that there was mention of "corona discharge." Oh?

It would be readily accepted by the public that the Timmerman experiments with 1000 Hz power generation in lieu of 400 Hz alternating current, but anyone familiar with the art of radio frequency antennas already knows that at voltages of less than 1,000 volts, corona effects are rare if not impossible (depending of conductor spacing, dielectric constants and so forth).

From an electronics design perspective, the Timmerman "1000 Hz" current makes absolutely no sense. Magnetics for transformers, for a given power, do not change appreciably by just changing the operating frequency of AC by some miniscule shift like 4000 Hz to 1000 Hz. That's absurd!

UNLESS there was something going on that use a LOT of high voltage D.C. power (at many kilowatt energy levels). But, if so, toward what end? I don't believe the question has raised in a *Freedom of Information Act* (FOIA) request about the Timmerman.

Despite the obviousness of the admission (and I think misdirection), the Navy version continued:

> "ONR has never conducted any investigations on invisibility, either in

> 1943 or at any other time (ONR was established in 1946.) In view of present scientific knowledge, ONR scientists do not believe that such an experiment could be possible except in the realm of science fiction. [133]"

Yet, as we analyzed the Philadelphia Experiment reports, the real gem in the pile was the USS Timmerman. Which was, in fact, *brought up* by the ONR document.

Even today, Wikipedia seems to parrot this misdirection:

> "Another possible origin of the stories about levitation, teleportation and effects on human crew might be attributed to experiments with the generating plant of the destroyer USS Timmerman (DD-828), whereby a higher-frequency generator produced corona discharges, although none of the crew reported suffering effects from the experiment.[134]"

Coronas? The Timmerman, indeed, seems to fit the profile of what we'd be looking for:

> "USS Timmerman (DD-828/EDD-828/AG-152) was a Gearing-class destroyer; an advanced-design vessel constructed for the U.S. Navy in 1954. After four years of design testing and sea trials, Timmerman was no longer needed, and was scrapped.
>
> Timmerman was originally planned as a Gearing-class destroyer in the United States Navy. Work was temporarily suspended on 7 January 1946 at 45.5% completion. She was later completed as an experimental destroyer, EDD-828. Designed to occupy the same space in standard Gearing engine spaces, Timmerman's machinery was designed to generate 100,000 shp (75,000 kW) versus the Gearing's 60,000 shp (45,000 kW). She had an aluminum superstructure.[135]

I saved the best part of the Timmerman tie-in until now…

> "The ship was decommissioned at Boston on 27 July 1956. She was moved to Philadelphia, Pennsylvania, in September and assigned to the Reserve Fleet. In early 1958, Timmerman was declared unfit for further service and struck from the Navy list on 4 April 1958. On 21 April 1959, she was sold to the Boston Metals Co., Baltimore, Maryland, and

scrapped.[136]

The content of the Internet suggests we keep this story as a data set for our analysis. It is easy to find accounts like this one:

> "This I do know firsthand, that an old man living in a room in a hotel near me, used to talk about a sailor's bar in which crew members who survived this experiment would disappear, often vanishing from their feet upwards. This could be prevented by laying hands on them. This old man would elaborate on the experiment which caused this condition.
>
> Without offering any more anecdotes, I have reason to believe that these experiments bore fruit. It follows that not everything on the internet is false ;-)[137]"

We're not sure. But we do know the level of sourcing is often abysmal.

There is one site on the internet that actual has some hints in the general direction of our research. It claims, in part:

> "In a search for actual technical data on the experiment, not much information can be found that isn't tainted with doubt and speculation. The basic design has two large Tesla coils (electromagnets) placed on each hull of the ship. The coils are turned on in a special sequence and their magnetic force is so powerful that they warp gravity itself. Bielek also says that on August 12 every twenty years, the magnetic field of the Earth reaches a peak and allows the synchronization between the Tesla coils. The oscillator, which Bielek claims to have run the coils in a special pattern, looks more like an Army field kitchen refrigeration unit than anything else. Many believe that's exactly what it is and Bielek's story is just a hoax. Bielek gave it a technical name however: the "Zero Time Reference Generator." The oscillators would synchronize with the adjustable phase angle and created a scaler type wave (Anderson). Several scientists today have attacked Bielek's testimony on this, as they believe a vector wave would have been more efficient and probable. Bielek also does not make clear if the power used is AC or D.C., pulsed or rotating, and what the Microwave and

> Radar frequencies are. In other words, Bielek provides almost no accurate technical information that can be used.
>
> Rick Anderson however, may be able to shed some light upon the subject. He states that four RF transmitters were phased to produce a rotating field. This field was pulsed at a 10% duty cycle. Instead of two coils, he says that four coils would have been set upon the deck of the ship and would be run by two generators that were pulsed in a counter-clockwise motion. Anderson states that the Tesla coils use a total of 7,500 feet, or 1.42 miles of #16 magnet wire. Because of this enormous quantity, no one has privately undertaken the experiment; the wire would be too expensive and also must to be wound in a special way (Anderson). Other scientists believe that Nuclear Magnetic Resonance and the science of the "Philadelphia Experiment" are connected.[138]"

Again, more *alleged* science, but we're not sure what to make of it.

Yet…

The problem before us is that the U.S. Navy seems to have played a game of "three-ship Monte" – just like the old shell game played by con men.

The third ship in the story is called the IX-97. Built in 1911 and christened the *Thelma,* this ship was a large luxury yacht that was converted to mine sweeper duty and renamed the U.S.S. Martha's Vineyard.

In a booklet published in 2001, purportedly by Robert W. Beckwith, the ship was supposedly equipped with equipment (beyond conventional degaussing equipment) that provided for a three-phase "field" to encompass the ship. According to the pamphlet[139]:

> "The forward cabin of the IX97 formed the research room which would house our experimental gear. The bridge was above. A second cabin aft housed controls for 3 special-looking high-current motor-generators which were the size and shape of oil drums standing on end. Integral motors were driven from ships power. These 3 current generators -- manufactured by the General Electric Pittsfield Mass. division -- were mounted on the fantail.

> A heavy cable went from each of two of the generators to locations looping overboard on the port and starboard sides. These were useable carrying a sing-phase current in experiments in triggering a ship detector as in Figure 1. A third cable was looped along the superstructures. The 3 cables were bonded together at the most forward point of the bow.
>
> We understood that all of the generators would be driven at the same variable frequency to create a 3-phase positive phase sequence source of power to produce a rotating magnetic field. Undoubtedly, the IX97 was at Newport, RI nearby to Pittsfield, MA for the GE installation of 3 current generators."

In the accompanying text, there is discussion of the involvement of Nicola Tesla who, on his deathbed, conveyed some of his knowledge to Dr. Edward Teller, the father of the American H-bomb project[140].

According to the account, Teller, working with others, concocted a system whereby the ship, Martha's Vineyard, was able to leap through time, only to return to its starting point upon the disconnection of power from the odd apparatus.

That said, the persons on the ship who were fully enclosed *inside* suffered no ill effects, but those on the decks were in some cases *fused* at a molecular level with the steel decking, and so forth.

Beckwith writes that it was likely because the field involved in the teleportation process used the Tesla-Schumann resonance (7.32 Hz) to accomplish its moves.

As an explanatory note, the conventional Schumann resonance is a cavity resonance *calculation* (7.83 Hz) whereas the Tesla 7.32 Hz number came from his observations and experiments. Choose your favorite.

In developing the 7.32 Hz field, the ship differentiated Hilbert Space[141], and under those conditions, metal and human flesh could attempt to occupy the same space, with catastrophic results for living organisms if space was re-differentiated when jointly occupied.

The fascinating details here are the persistence of a rumor that a "field" at

substantial *current* and a very *low frequency* may cause teleportation.

Significantly, the equipment that involved was, in the Beckwith description, about the “size of an oil drum” and he estimated 50 horsepower. In terms of energy, the conversion efficiency of generators would likely have been 80-90%, the output power would have been 45 horsepower which would translate to something greater than 33,000 watts. A *lot* of energy was involved.

But three such units are not too bad if it could make a ship disappear.

11. Montauk Project Data

[**High-level:** The world of “woo-woo” is littered with reports of high strangeness and if you put big anomalies on a timeline, the next clusters between 1945 and the modern era would include the 1952 mass UFO sighting over Washington D.C.[142] and then later, the so-called “Montauk Project.”]

While we generally don’t like to rely on large sections of Wikipedia for research, in the case of Montauk Project Data, most of the story is presented in a book which is argued as non-fiction by supporters yet at the same time, reads very much like science fiction[143].

Let’s start with the big picture first:

> “The Montauk Project: Experiments in Time by Preston B. Nichols and Peter Moon is the first book in a series detailing supposed time travel experiments at the Montauk Air Force Base at the eastern tip of Long Island as part of the Montauk Project.
>
> The 1992 book and its follow up books are written in a first-person style and are widely believed to be science fiction. The real photographs of the base and crude drawings of the project electronics in the book contributes to the authentic feel prompting the project to assume a cult status whereby websites declare it is true or false.
>
> Using a time travel theme, the characters alter history with visits to Jesus Christ, altering the outcome of Civil War and World War II battles and often doing battle over the Scientology characters.[144]

The way the plot is laid out in the book, an elaborate linking (through time travel) is argued to exist between the Philadelphia Experiment and events at Montauk:

> The book's narrative is centered around the Montauk Project, which is believed to be an extension or continuation of the Philadelphia Experiment (also known as Project Rainbow), which supposedly took place in 1943.
>
> Sometime in the 1950s, surviving researchers from the original Project

> Rainbow began to discuss the project with an eye to continuing the research into technical aspects of manipulating the electromagnetic bottle that had been used to make the USS Eldridge (DE-173) invisible, and the reasons and possible military applications of the psychological effects of the magnetic field.
>
> A report was supposedly prepared and presented to the United States Congress, and was soundly rejected as far too dangerous. So, a proposal was made directly to the United States Department of Defense promising a powerful new weapon that could drive an enemy insane, inducing the symptoms of schizophrenia at the touch of a button. Without Congressional approval, the project would have to be top secret and secretly funded. The Department of Defense approved. Funding supposedly came from a cache of USD $10 billion in Nazi gold recovered from a train found by U.S. soldiers in a train tunnel in France. The train was blown up and all the soldiers involved were killed. When those funds ran out, additional funding was secured from ITT and Krupp AG in Germany.[145]"

For the purposes of analysis in this book, we are less concerned about the elements of adventure than we are the underlying electronics. As was discussed previously, the effect we might be seeking could be a multi-spectral field effect caused by a multiplicity of fields, each operating orthogonally (e.g. at right angles) to the others and set with specific *frequency* and *phase* relationships between the fields.

We can dispense with the adventure aspects – such as suggesting that Nikola Tesla really ran the lab – and satisfy ourselves that the most "edgy things" done at Montauk may have been projects related to the U.S. space program and the evolution of the Texas Towers radar programs off the East Coast.

That program was to have been a total of five offshore platforms (akin to oil platforms) that would have presented a unified electronic "picture" for battle commanders defending American airspace. The Role of Montauk picks up there:

> "The massive AN/FPS-35 radar (more than 100 yards wide, weighing 70 to 90 tons), sitting atop an 80-foot (24 m) high blast-resistant

concrete bunker, was built in the 1960s as part of a coastal defense for New York City during an era when airplane bombers were considered a primary threat. The early computers of this era were massive in size and housed in the bunker. Both the radar and the computers quickly became obsolete. Although the radars were dismantled elsewhere, the Montauk radar was subject to an intense petition drive by boaters on the crowded Long Island Sound who thought it was a more obvious landmark than the nearby Montauk Lighthouse.

The site was also full of massive gun emplacements from World War I and World War II, built in blast-resistant concrete bunkers. There is also a modern ghost town of support buildings. All of this was intentionally disguised to hide it from the air.

The site was opened to the public on September 18, 2002 as Camp Hero State Park. The radar tower has been placed on the State and National Register of Historic Places. There are plans for a museum and interpretive center focusing on World War II and Cold War era history.

Despite rumors, no traces of secret underground facilities have been found.[146]"

In addition to what we could label a "high-power acquisition radar" other electronics were in use at the facility including the expected VHF and HF radio equipment associated with such a base.

It is 16.5 statute flight miles from the Montauk airport (now public use) to Block Island which is on an easterly heading (085 degrees) from Montauk. There is a Variable Omni Range (VOR).

Other than noting that the location of the radar on the northeastern-most part of the Montauk facility is interesting, we also noticed one other oddity:

Just as the Bruce Gernon flight originated from the airport adjacent to the AUTEC facility on Adros Island in the Bahamas, which has and underwater acoustical range, the U.S. Navy has major east coast submarine facilities at Groton/New London, Connecticut just 16 miles on a heading of 355-degrees from Montauk.

Many years ago, a former colleague who was employed at Mitre Corp. sent

me the Preston Nichols interview on VHS tape. It was making its rounds in the tech community of 1998 and making some stir among the brightest of geeks.

I remember being struck by the electronics capabilities Nichols claimed to have. It is a fair question to wonder whether persons experienced and skilled in the electronic arts could have fabricated a story involving Montauk and liking it to the earlier purported events.

Whether other inventions were actual evolved at the Montauk base is beyond the scope of this book. The interesting allegations surrounding the site argue for its inclusion in our study. For example, on Facebook we find:

> "Enrico Chekov, a Spanish-Russian dissident, reported in 1988, after defecting to America, that satellite surveillance captured during the 1970s showed the formation of a large bubble of space-time centered on the site, lending further support to the D1 Base Time Tunnel research. After Chekov shared photographs with a reporter from the New York Times, his apartment in Manhattan was burgled and the photos were all that was taken. (Of course)[147]."

We will include consideration of the electromagnetic spectrum around this facility, although we recognize that inclusion of a story due in any portion to allegations turned up on Facebook, will likely get us quickly "unfriended" by the scientific community.

Even so, the Montauk stories do have a well-documented government electronic footprint:

> "After the 1948 Berlin Blockade in Germany, the Cold War was on and with the appearance of the Soviet Tupolev Tu-4 intercontinental bomber in 1947, a major concern of the United States was a possible attack by Soviet long-range bombers. In 1948, the United States Air Force (USAF) directed its Air Defense Command (AD.C.) to take radar sets out of storage for operation in the Northeastern United States. By August, a radar had been placed at Lashup Site L-10 at Montauk, NY. This program was appropriately named "Lashup."[148]

In these early years, we note that the two types of radar in common use were the low band (172 MHz VHF and 214 MHz UHF) versions and the more

recently-evolved cavity magnetrons which operated in the 3 GHz spectrum.

Electronically, they are much different beasts, but more on that in our analytics discussion.

> "As part of this temporary network, AD.C. placed an AN/TPS-1B long-range search radar at Fort Hero in June 1948 and designed the site as Montauk Point, L-10. The Montauk site fed into a primitive control center established at Roslyn AFS, New York. In 1950 it activated the 773d Aircraft Control and Warning Squadron (AC&W Sq) to operate the facility. [6] On 1 December 1953, the site designation was changed to LP-45 and the Air Force facilities were renamed Montauk Air Force Station. Montauk AFS was incorporated into the permanent AD.C. Network of General Surveillance Radar Stations.
>
> With the establishment of a permanent presence, AD.C. equipped the site with AN/CPS-5 and AN/TPS-10A height-finder radars. A year later AN/FPS-3 and AN/FPS-5 radars were operating. Between 1955 and 1956 an AN/FPS-8/GPS-3 made an appearance at the tip of the site. In the spring of 1957 Montauk AFS received one of the first AN/FPS-20 units along with a pair of AN/FPS-6 height-finder radars.
>
> In November 1957, the Army closed the Camp Hero portion of the military reservation as Soviet long-distance bombers could fly well above ground-based artillery. The Air Force continued using the western half of the facility for radar surveillance. The Eastern portion of the site was donated to New York State, but it remained unused because of its close proximity to a high-security facility.
>
> During 1958 Montauk AFS joined the Semi-Automatic Ground Environment (SAGE) system, feeding data to D.C.-01 at McGuire AFB, New Jersey. After joining, the squadron was redesignated as the 773d Radar Squadron (SAGE) on 1 October 1958. It was also a major part of the NORAD defense system, so security was very tight. Montauk AFS was state of the art and many new systems were developed or tested there including magnetic memory for storage, light pens, keyboards, WANs (Wide area networks) and modular circuit packaging.

> Montauk was the operational parent station for Texas Tower 3 (TT-3) offshore in the Atlantic Ocean from June 1958-25 March 1963. TT-3 was operated as an annex of the 773d AC&W Sq, with its offshore personnel assigned to a flight of the 773d, although the facility was logistically supported by the 4604th Support Squadron (Texas Towers) at Otis AFB.[149]"

The only other historical fact about Montauk that seems to matter is that it was not home to the original *Cronut* pastry. That honor belongs to New York[150]. (Is someone hungry while researching? Hmmm…)

The main contentions of Montauk story relate to the unproven, though likely fictional, tie-in with the 1943 Philadelphia Experiment and that "demonic entities" could be materialized into the current world by subjecting a person in a special chair with electromagnetic influences, some of which were alleged to be microwave spectrum. The tale told on videotape (going from memory here) described using an "axe to cut waveguides" to put an end to the monstrous beings materialized from a test subject's subconscious.

This may seem far-fetched, but when we review the literature, there is substantive support for such claims. For example, in the abstract of a 2003 paper, "Behavioral and Cognitive Effects of Microwave Exposure [151]" we read that:

> "It has been pointed out by several sources that exposure to RF radiation can lead to changes in the behavior of humans and laboratory animals that can range from the perceptions of warmth and sound to lethal body temperatures. Behavior of laboratory animals can be perturbed and, under certain other conditions, animals will escape and subsequently avoid RF fields; but they will also work to obtain a burst of RF energy when they are cold. Reports of change of cognitive function (memory and learning) in humans and laboratory animals are in the scientific literature. Mostly, these are thermally mediated effects, but other low-level effects are not so easily explained by thermal mechanisms. The phenomenon of behavioral disruption by microwave exposure, an operationally defined rate decrease (or rate increase), has served as the basis for human exposure guidelines since the early 1980s and still appears to be a very sensitive RF bio-effect. Nearly all

> evidence relates this phenomenon to the generation of heat in the tissues and reinforces the conclusion that behavioral changes observed in RF exposed animals are thermally mediated. Such behavioral alteration has been demonstrated in a variety of animal species and under several different conditions of RF exposure. Thermally based effects can clearly be hazardous to the organism and continue to be the best predictor of hazard for Homo sapiens. Nevertheless, similar research with man has not been conducted. Although some studies on human perception of RF exist, these should be expanded to include a variety of RF parameters."

It is here that we really come to the heart of this book: We are again seeing references to a "variety of RF parameters."

But does it stop with RF?

The answer is definitively NO! Phenomenon involving both light *and* sound are likely key to mapping out the spectral approach to possible Dimensions Next Door.

12. PBM, LLLT and "The Light Crown Project"

[**High-level:** Between low frequency *earth energy*, the lower frequencies prevalent in WW II (until the cavity magnetron breakthrough in 1943) and then the reports of microwaves having a critical role at Montauk, what happens if we move extensibly to still higher frequencies…including *Light*? I've been working on it…]

If you were hoping we would discuss the Martin Aircraft *PBM,* a World War II-era flying boat that complimented the *Catalina PBY*, you would be wrong but illustrative of one of the obstacles to "investigative thinking."

Specifically, it *changes over time*.

Words, initials, and acronyms come and go with startling regularity.

Even today, PBM is understood to mean different things to different people depending on their orientation. In the airline industry *PBM* is the International Air Transport Association city code for Paramaribo-Zanderij International Airport, one of the two largest in Suriname.

Those in the high-tech communications industry will recognize it as *Personal Broadband Mobile.*

Again, depending on specialty, PBM could mean a Play-By-Mail game, Poultry By-product Meal, Pharmacy Benefit Management, or in biology, a Protein-Binding Microarray. These are all well-documented meanings of the term PBM[152]

Sadly, for the researcher, PBM suffers from the same kind of *linguistic pollution* we ran into while considering the "foo fighter" phenomenon of WW II. The music group *Foo Fighters* made finding more details of the other 'foo's' more challenging. It's a notable by-product of *hyper-complexity*.

Unfortunately, for many researchers, PBM for us is shorthand for photo bio-modulation. In simplest terms, the manipulation of *life* by *light.*

Despite it's not yet "making it" (to the Wikipedia disambiguation page as of this writing) PBM is getting *lots* of interest in medicine. As you can see in

the following chart, knowledge in this area is just now “going exponential.”

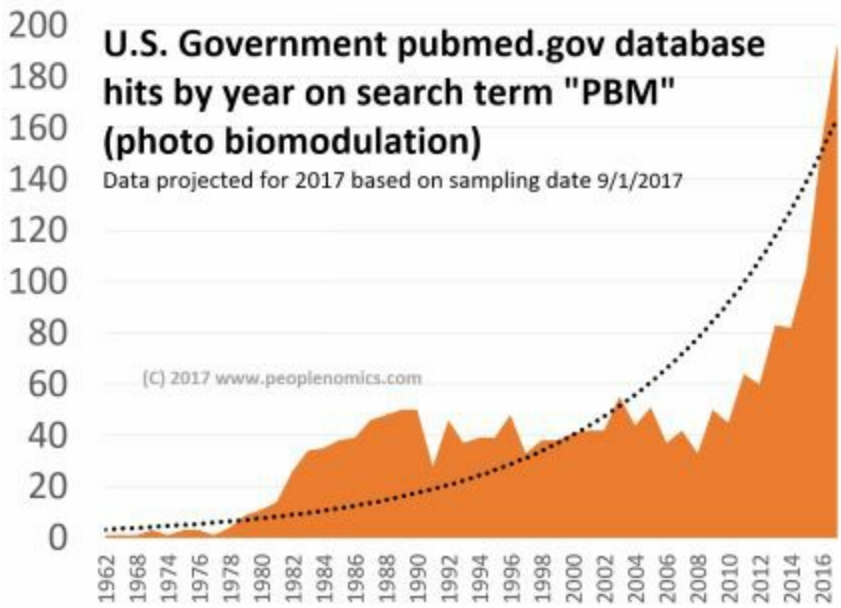


Photo bio-modulation is not a terribly difficult concept. But it helps to understand that we are struck by the correspondence between “Light” references in multiple religious doctrines and books (like the Bible), and recent discoveries that demonstrate human cells *give off and receive light* as part of their normal operation.

The most startling case involves research that was publicized in 2010. In an article titled “LIGHT POLLUTION: Light at Night and Breast Cancer Risk Worldwide” author Angela Spivey wrote (in part)[153] :

> “Several studies over the last decade have suggested that the modern practice of keeping our bodies exposed to artificial light at night, or LAN, increases cancer risk, especially for cancers (such as breast and prostate cancers) that require hormones to grow. Women who work night shifts have shown higher rates of breast cancer, 1 whereas blind women, who are not likely to be exposed to or perceive LAN, have shown decreased risks.2 In 2007, the International Agency for Cancer Research declared shiftwork a probable human carcinogen.3 Now a large study of 164 countries adds another piece of evidence, implicating overall light pollution.

> The study, conducted by University of Connecticut epidemiologist Richard Stevens and colleagues at the University of Haifa, showed that higher population-weighted country-level LAN levels were associated with higher incidence of breast cancer.4 A sensitivity test indicated a 30–50% increased risk of breast cancer in countries with the highest versus lowest LAN levels. No such association was found between LAN and incidence of non-hormone-dependent lung, colorectal, larynx, or liver cancers in women."

Although off topic for the purposes of this book, we are appalled by a medical "profession" that does not *routinely* counsel all patients, based on well-described data, that a) night shifts are a likely cancer risk, b) so is sleeping in a not-completely darkened room, c) especially if you're a woman, and d) super-especially if you have any genetic or familial predisposition to cancer.

WTF ever happened to "*First do no harm?"*

Not all light is bad, however. We need to distinguish between visible and invisible light because of the nature of human evolution.

We know, for example, that sitting around a campfire, perhaps all comfy in a sleeping bag, that we can watch a natural phenomenon of a "frequency sweep" by light.

We watch as a brightly blazing fire burns first in the bright yellow range. This is the 500-560 nanometer (nm) portion of the light spectrum. The odd flash of green will appear on the way to the hottest – blue – flames in the 400 nm wavelengths and shorter.

As our camp fire begins to use available fuel, it turns first to the oranges and then the dull reds. The brighter reds are in the 600-660 nm spectrum approaching infrared. As further cooling sets in, that beautiful deep red (660-720 nm) sets in. These are described as "Super Red" LEDs.

Beyond this, as the fire cools to where there is still some heat, but no visible light, the fire has transitioned to longer energy spectra from 800-1000 nm. This is the "far infrared" range.

This inclination of the body to "like" seeing the lights "toned down"

approaching sleep is a naturally evolved process. We're pleased that handheld reading devices, such as the Amazon *Kindle*, offer 'nighttime reading" which shifts more of their LED screen displays to the yellow and red end of the spectrum.

Similarly, there is software that I use in the *Windows 10* environment that does much the same thing.

Due to four eye surgeries necessitated when one of my intraocular lens implants failed after almost 25 years, I have become exceptionally sensitive to ultraviolet and "white light overload." A software program called "f.lux"[154] holds my maximum monitor color (a 55" UHD display) to a warm white hue in the daytime and chills it down to a much more yellow-red mix at night. With more options, the program *IRIS* may be of interest, as well.[155] I find myself using this one more than *f.lux* but both are great.

You should know that there are several ways color is measured. One way, mentioned previously, is by wavelength in nanometers (nm). The other is by "color temperature" in Kelvin. A "daylight" fluorescent light would put out light in the 6,800° Kelvin range. A modest incandescent lamp would be yellow by comparison, at about 2,700° Kelvin. While a Halogen light would be in the range of 3,400° Kelvin.

If you work under fluorescent lamps, the 5,400° "warm white" variety are more soothing, but the "cool white" are off toward daylight (6,800° K) and result in increased "alertness."

Occasionally, I will run the monitor "flat out" – which pushes my UHD almost into the tanning bed range up at "Daylight" or 6,800° Kelvin. This is particularly useful when crunching on a difficult economic problem or manipulating charts. But once that's done, I dial things back to 4,800° K *plus* I put on a pair of adjustable focus UV moderating glasses designed to roll off the UV output from big monitors.[156]

When I don't remember to "dial it back" on the UV side, my eyes, particularly the left one with recent surgeries, gets very irritable. The contact lenses become dry and scratchy in an hour and I have to figure out what I've done wrong. Three or four days later, the operative eye is back into the 20-30 range again.

Not all light is bad. I hope you didn't get that impression.

In fact, my wife Elaine, has been able to virtually stop the progression of age-related macular degeneration (ARMD or AMD for short) in one of her eyes. She applies a properly dosed level of 660-700 nm red light to her eyes, three minutes per day, three days per week.

Elaine's red LED sequence is repeated three weeks in a row and then she takes a week off. At the same time, she is also taking a superb assortment of eye-improving vitamins. I would refer you to some excellent papers on the internet reviewing the increasingly clear link between ARMD and critical vitamins. We both take the Bausch & Lomb *PreserVision* ARED2 product, but there are others that may be as good.[157]

This should not be undertaken without medical supervision, however. Too much infrared can burn the back of the eye and, indeed, it's a common risk among welders. So, don't cobble up something at home without expert guidance!

READER NOTE: NONE OF THIS IS MEDICAL ADVICE. IT IS PRESENTED SO YOU MAY DISCUSS EMERGING ARMD TREATMENT OPTIONS WITH YOUR MEDICAL PROFESSIONAL. Bausch & Lomb *ARED2* vitamins are OTC.

That said, we are aware of several small near-infrared (NIR) handheld anti-ARMD devices that may be on the market in other countries in the next year, or two. Due to FDA requirements, it is easier for companies to roll out products in other countries first and then get them accepted in the U.S.

This circles back to the role of red *low-level laser light therapy* (LLLT) which has been shown to be remarkably effective in a diverse range of settings ranging from wound healing to bone repair to optical repairs.

Some of the earlier work in LLLT was done by Julio Rojas and F. Gonzalez-Lima in their paper "Low-level light therapy of the eye and brain." Here's the abstract[158]:

> "Low-level light therapy (LLLT) using red to near-infrared light energy has gained attention in recent years as a new scientific approach with

> therapeutic applications in ophthalmology, neurology, and psychiatry. The ongoing therapeutic revolution spearheaded by LLLT is largely propelled by progress in the basic science fields of photobiology and bioenergetics. This paper describes the mechanisms of action of LLLT at the molecular, cellular, and nervous tissue levels. Photo neuromodulation of cytochrome oxidase activity is the most important primary mechanism of action of LLLT. Cytochrome oxidase is the primary photo acceptor of light in the red to near-infrared region of the electromagnetic spectrum. It is also a key mitochondrial enzyme for cellular bioenergetics, especially for nerve cells in the retina and the brain. Evidence shows that LLLT can secondarily enhance neural metabolism by regulating mitochondrial function, intraneuronal signaling systems, and redox states. Current knowledge about LLLT dosimetry relevant for its hormetic effects on nervous tissue, including noninvasive in vivo retinal and transcranial effects, is also presented. Recent research is reviewed that supports LLLT potential benefits in retinal disease, stroke, neurotrauma, neurodegeneration, and memory and mood disorders. Since mitochondrial dysfunction plays a key role in neurodegeneration, LLLT has potential significant applications against retinal and brain damage by counteracting the consequences of mitochondrial failure. Upon transcranial delivery in vivo, LLLT induces brain metabolic and antioxidant beneficial effects, as measured by increases in cytochrome oxidase and superoxide dismutase activities. Increases in cerebral blood flow and cognitive functions induced by LLLT have also been observed in humans. Importantly, LLLT given at energy densities that exert beneficial effects does not induce adverse effects. This highlights the value of LLLT as a novel paradigm to treat visual, neurological, and psychological conditions, and supports that neuronal energy metabolism could constitute a major target for neurotherapeutics of the eye and brain."

What we know is that properly used LLLT benefits a wide variety of conditions. Here's a 2016 paper discussing "Transcranial laser stimulation as neuroenhancement for attention bias modification in adults with elevated depression symptoms[159]" for example. Yes, light can elevate mood, witness "sunshine vitamin D."

With so much data piling up about the efficacy, not to mention the non-invasive, low-risk nature of LLLT/PBM, I went to work on a "personal science" project at my well-equipped home electronics bench which I sometimes refer to as "*Old Man Labs*."

The results were presented for my www.peoplenomics.com subscribers. I called it?

The "Light Crown" Project

(Published October 8, 2016 on www.peoplenomics.com)

With so much media focus on the presidential candidates' debate tomorrow, and with the aftermath of the hurricane, I wanted to spend some time this morning putting some new thinking on the table.

As you will see as the tale unfolds, it has everything to do with health, power, and money. More important, it may hold ways to improve investment performance.

The topic of our talk this morning is *healing properties of light*.

Not just any light, but specific colors arranged in special ways.

A bit of history, as shared with a friend who is a serious laser light researcher and chief medical officer of a start-up which is in the photo-biomodulation space.

Did you know, for example, that there are many descriptions of glass prisms being used to break up sunlight into its constituent colors which were then directed into certain chambers in pyramids (and other structures) where colored light was used for healing?

Here are some additional historical points he shared:

- Henri de Mondeville (1300's) – research on effects of Red light[160].
- Pleasanton (1876) – Blue light healing[161].
- Babbitt (late 1800s) - comprehensive theory of color healing; Chromolume[162]. The long ScribD book length is online[163].
- Finsen (1903) – Nobel Prize in Medicine for work with photomedicine Niels Ruberg Finsen bio is shown online[164].
- Ghadiali (1927) – Spectro-Chrome Encyclopedia[165]
- Klotsche (1930s) – Color Medicine[166]
- Ott (1950-80s) – "Full spectrum light[167]"

BTW: I use an Ott full-spectrum light in my office and it's great for reading

and close work on micro-electronics...

Our purpose in this morning's investigative summary is not to parrot the background of medical and healing efforts involving light. Rather it is to look at things in a little different way.

It occurred to me that if light can be used to treat (and prevent progression) of serious diseases like macular degeneration, that light's other medical aspects should be considered, as well.

People suffering from depression, for example, are said to "have the blues."

Certain emotions are intimately linked with color inputs such as "red with rage" (or passion) and "green with envy." In early 20th-century speech, a proper response to the question "*How are you feeling*?" was "*Right in the pink…*[168]"

Color is also associated in the psychedelic world with excessive cannabis loading (*purple haze*) and the ever-popular Beatle's tune ["We all live in a…] *Yellow Submarine*" or Donovan's "[They call it…] *Mellow Yellow.*"

Going even a bit further, off on the outer fringes of pseudo-science, we find references in Electronic Voice Phenomena (EVP) of "*entity voices*" reporting a world when color on some other level of existence is associated much more strongly than it is on this plane. One entity account I read several years ago said that the physicality of objects was equaled by their coloration and tone. This is a vastly different worldview than predominates on this plane where color exists, but reductionism to a "wire-frame" reality is more acceptable, particularly in the engineering sciences.

A Far-Out Crown Theory

In addition to a ton of economics books, I've also spent some time in past decades reading the various theories of crypto-archeology. The "hidden history" of mankind is a recurrent theme among many very good writers especially the likes of Graham Hancock[169].

Taken individually, each of the specific archeology discoveries that are discontinuous with prevailing "modern" academic consensus is indeed arguable. However, when one considers the *preponderance* of such data/findings, it becomes much more difficult to wholly discount ANY

alternative interpretation of humankind's past.

We begin with writings of the Greeks. They discussed a [mythical?] land of Atlantis located west of the Med out past Gibraltar (Gates of Hercules).

There has been some supposition, especially in all that was written about the Mayan Calendar prior to December 2012, that the Earth may have suffered a crustal shift in our past. The Hapgood theory of *polar shifts* is noted[170].

This would (goes the theory) have rotated what is not the Antarctic south from an Atlantic location. *Woo-woo* fans love tying this in with phenomena in the Bermuda Triangle, although it is a stretch to do so.

What is less so is the evolution of humans from the Mu[171], Lemuria[172], Atlantis[173] stories. A very good case can be made that survivors of previous great cataclysms found their way from the Antarctic to southern Africa and to the southern tip of South America.

It was while contemplating the headgear of these early re-inhabitants that I first began to mull over the "crown" idea. Color is key – but there must be more to it…

We see how "crowns" came up Africa and were worn adorned with colored jewels.

What do jewels on regal headwear do? The keep *general* light off part of the head and they allow only *filtered* light (acting like an optical passband filter) to arrive and touch the skin.

South America was a different case. There, precious colored stones were considerably rarer. So (and this is my supposition) the information about colors of headgear could have been maintained symbolically through representation by different color bird feathers.

Over time, crown evolution worked its way North and grew in importance as crowns (along with colored gems) became key to power holders in Europe and Asia.

The Critical Question

We know that crowns are worn by royal families. But what there seems to be damn little research into are the specific colors and arrangement of the

filtered light. We can break the concept of “Light Crowns” in bullet points something like this:

- Might there have been highly evolved light technologies before the modern era?
- In 280 B.C. Posiedippus of Pella writes of an amazing light[174] at the port of Alexandria, Egypt which could be seen at great distances by day and far more at night. In the book “The Electric Mirror on the Pharos Lighthouse”, this and numerous other ancient electric light stories are told. The Pharos Lighthouse is listed in search results, and Wikipedia, but no attribution in officialdom of anything other than conventional means...
- Finsen (the 1903 Nobel winner) and others have been working on the colored light for “healing” methods for 100+ years.
- Modern experiments are gauging not only specific frequencies, but pulse rates as well that accentuate tendencies to heal.

And what frequencies (in nanometers of wavelength) correspond to what colors?

Color	Wavelength (nm)
Red	780 - 622
Red	780 - 622
Orange	622 - 597
Yellow	597 - 577
Green	577 - 492
Blue	492 - 455
Violet	455 - 390

Source data is available[175].

Then it becomes simple to associate colors with specific gemstones.

·The next step after that?

Specific physical results by light frequency are now appearing in scientific literature:

- Low-level laser therapy (904nm) can increase collagen and reduce oxidative and nitrosative stress in diabetic wounded mouse skin[176].
- An 808-nm Diode Laser with a Flat-Top Handpiece Positively Photobiomodulates Mitochondria Activities[177].

- Pre-Exercise Infrared Low-Level Laser Therapy (810 nm) in Skeletal Muscle Performance and Post exercise Recovery in Humans, What Is the Optimal Dose? A Randomized, Double-Blind, Placebo-Controlled Clinical Trial[178].

These are only a few examples where specific color of wavelength is stated.

The “special properties” of a conventional (bejeweled) crown has be intuited as being in the “rediscovery phase” by reading the following article:

Cerebral Perfusion Enhancing Interventions: A New Strategy for the Prevention of Alzheimer Dementia[179].

Pay attention to this part of the above abstract:

> “Brain hypo perfusion in the elderly is strongly associated with the development of mild cognitive impairment (MCI) and both conditions are presumed to be precursors of Alzheimer dementia. A therapeutic target to prevent or treat MCI and consequently reduce the incidence of AD aims to elevate cerebral perfusion using novel pharmacological agents. As reviewed here, the experimental pharmaca include the use of Rho kinase inhibitors, neurometabolic energy boosters, sirtuins and vascular growth factors. In addition, a compelling new technique in laser medicine called photo biomodulation is reviewed. Photo biomodulation is based on the use of low level laser therapy to stimulate mitochondrial energy production non-invasively in nerve cells***. The use of novel pharmaca and photo biomodulation may become important tools in the treatment or prevention of cognitive decline that can lead to dementia***.” [Emphasis added]

I think the evidence, though a small data set at this time, begins to argue persuasively for further personal research into the area.

The notion that Royals were able to think more clearly and well into old age without as much mental fog being duplicated today by wearing a light enhancing “crown” is not entirely out of the realm of possibility.

Engineering a “Light Crown”

I won’t get too deeply into the topic here, except in most general terms.

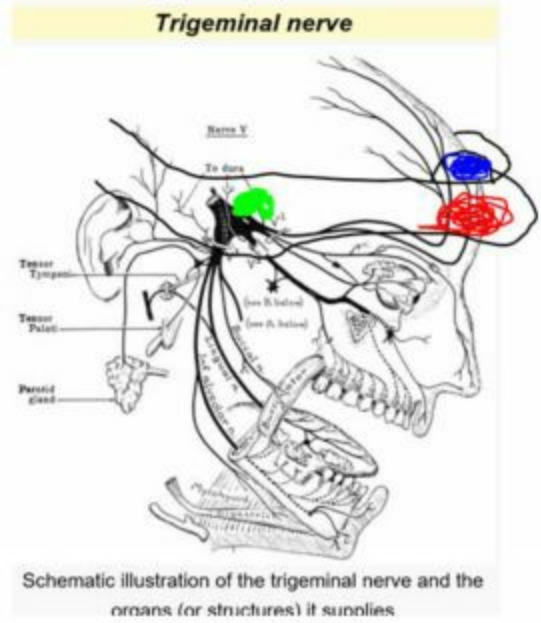
A review of a wide selection of publicly available crown photos on the Internet shows that regal headgear does tend to have a pattern to it.

There is generally one large color at the center of the forehead. Most common colors are red/ruby which would be in the 660-1000 nm red, dark red, near infrared range. Some crowns use a larger lower and a smaller upper stone in front. These are near the pineal gland (the "third eye") and may have simulative effects.

Let's face it, basic scientific research into the long-term effects of wearing a near-infrared emitter on your forehead is not one of the biggest agendas in the me-too world of peer-reviewed academia. Nor in dollar-based pharmacology.

Similarly, as we look at crowns as a design template, we can see (on most) that open-back gems illuminate the trigeminal nerve bundle as it transits the temple area. So, this which would be another logical colored light (gemstone) placement zone.

Pardon the rough artwork, but it might be something like this:



I penciled in a crude emerald at the temple, white or blue LED over and a right Near Infrared (NIR) LED under. On the far side, we could hit the other temple with a yellow LED and so forth.

Measurement of physical changes from the use of such a "light crown" would

not be difficult. Power densities near 2 microwatts per square centimeter seem reasonable with 4 microwatts a reasonable peak.

While we don't have any idea which "*light goes where*", the basic choices are available by looking at major crowns online.

The next problem is we don't know whether a specific frequency relationship between the lighting sources is required. For example, is purple or blue 1ʎ, while the green would be 2ʎ and the NIR right frequency becomes 3ʎ?

Could we work it backwards from say a 1000 nm NIR to a 560-nm yellow/green to a 386-nm blue/white? Perhaps representing a ruby, yellow diamond, sapphire…

Or, do we go green on one temple and then yellow on the other?

Further, the frontal light would need to be the NIR (perhaps with a white or blue) because NIR carries deepest into tissue. Trigeminal stimulus is near the surface and bone-free.

Then there is the test matrix: How long would the light crown need to be worn to see a measurable effect? What effect? Insight? Recall? Intuition? Muscle strength?

You can see the difficulty…. But with this discussion you may see some promise.

And it's more than just hype. I've heard from a credible source that an hour on a NIR (near-infrared) light (like tanning) bed type device can bump professional athlete performance by more than 5% and that's doing rigorous testing and measurements.

Only drawback? The cost of the test unit is reported well into six figures.

That's a pretty good chunk of change. Maybe not if you own a pro sports team

But a few shipments of different color LEDs from www.mouser.com and no telling what we might be able to cook up with some 2" wide elastic banding, some of Elaine's sewing skills and some Velcro for adjusting.

Just load me up with some Vector Board and we're ready to try almost anything.

Especially if it can enhance our ability to understand markets.

If you'd like to tinker in this off-beat area of pseudo-science (not that it doesn't work, it's just far from mainstream yet!) here's a Mouser shopping list:

Description		
941-CP41BWESCM0P0234 MFG Part No:CP41B-WES-CM0P0234 CP41B-WES-CM0P0234 Cree, Inc. Standard LEDs - Through Hole US HTS:8541100080 ECCN:EAR99 COO:CN	10	10
941-C513AMSSCW0Y0512 MFG Part No:C513A-MSS-CW0Y0512 C513A-MSS-CW0Y0512 Cree, Inc. Standard LEDs - Through Hole US HTS:8541100080 ECCN:EAR99 COO:CN	10	10
941-C503BBANCY0C0461 MFG Part No:C503B-BAN-CY0C0461 C503B-BAN-CY0C0461 Cree, Inc. Standard LEDs - Through Hole US HTS:8541402000 ECCN:EAR99 COO:CN	10	10
593-VAOL-10GDE4 MFG Part No:VAOL-10GDE4 VAOL-10GDE4 VCC Standard LEDs - Through Hole US HTS:8541402000 ECCN:EAR99 COO:TW	25	25
696-SSL-LX5093PC MFG Part No:SSL-LX5093PC SSL-LX5093PC Lumex Standard LEDs - Through Hole US HTS:8541402000 ECCN:EAR99 COO:CN	5	5
696-LX5093SRC/F MFG Part No:SSL-LX5093SRC/F SSL-LX5093SRC/F Lumex Standard LEDs - Through Hole US HTS:8541402000 ECCN:EAR99	10	0
630-HLMP-C315 MFG Part No:HLMP-C315 HLMP-C315 Broadcom Standard LEDs - Through Hole US HTS:8541402000 ECCN:EAR99 COO:TH	10	10

With shipping, about $31 dollars in discrete components plus another $12 for tax and shipping. One item was bock-ordered.

On the experimental design list are issues like power levels. Most of these are in the 200 - 1,000 mcd power levels, but a few are lower power. This means for these; multiple devices will be used.

Then comes the matter of testing and the test matrix, but that's the fun of crackpot science projects. Trying to look at old images on the web of crowns and trying to figure which light color arrangements would have the highest odds of success based on how various crowns place gemstones - which we've come to consider passive light filters.

And that gets us to the question "Is this physical property (light bandpass filters) what gives gems their "*precious*" label? From *real* properties?

Reflections on the Light Crown

I used the Light Crown for a period of a month, or two. There were a couple of subtle, yet personally very real effects.

The first was an improvement in mental acuity. This is subjective, of course, but there was a very relaxed state of higher awareness.

The second effect was a major increase in personal energy levels. With many things becoming clear in my mind, the problem (and it became quite real) was that I felt I'd "burn up in the atmosphere" having almost *too much energy*. Picture yourself *dripping with energy* – it's way cool.

A further observation from some of the experiments led me to conclude that I had fallen victim to the same "pattern of science" (the "Bigger Hammer") search. While I could achieve higher power-densities over the trigeminal nerve and center of forehead, there was an actual *lessened effect*.

The only way I can put it into words is that it's akin to being tickled on the one hand (at lower LLT levels) or run over by a bulldozer at the higher levels.

There was also a price in terms of skin heating, at the higher levels. You simply can't apply 20-watts of light to about 4 square inches of skin and not feel something – heat!

In discussing some of this with a friend who has done significant work in NIR healing modalities related to optical applications (our ARMD treatment doc), we discussed the benefits of pulsing the lights, as the first Light Crown was a simple "turn it on and sit there" device. We agreed that many frequencies would be of interest, but there's only so much time for research.

For now, just remember deep red LED light pulsed at 8 Hertz.

The Odd World of Terahertz Waves

Since we're wandering toward higher spectrum speculation, let's keep going. We don't need much more than a Wiki version of this one[180], but it's an important part of spectrum.

> Terahertz radiation – also known as submillimeter radiation, terahertz waves, tremendously high frequency, and T-rays, T-waves, T-light, T-lux or THz – consists of electromagnetic waves within the ITU-designated band of frequencies from 0.3 to 3 terahertz (THz; 1 THz = 1012 Hz). Wavelengths of radiation in the terahertz band correspondingly range from 1 mm to 0.1 mm (or 100 am). Because terahertz radiation begins at a wavelength of one millimeter and proceeds into shorter wavelengths, it is sometimes known as the submillimeter band, and its radiation as submillimeter waves, especially in astronomy.
>
> Photon energy in the THz regime is less than the band-gap energy of non-metallic materials and thus THz radiation can penetrate such materials. THz beams transmitted through materials can be used for material characterization, layer inspection, and as an alternative to X-rays for producing high resolution images of the interior of solid objects.
>
> Terahertz radiation occupies a middle ground between microwaves and infrared light waves known as the "terahertz gap", where technology for its generation and manipulation is in its infancy. It represents the region in the electromagnetic spectrum where the frequency of electromagnetic radiation becomes too high to be measured digitally via electronic counters, so must be measured by proxy using the properties of wavelength and energy. Similarly, the generation and modulation of coherent electromagnetic signals in this frequency range ceases to be possible by the conventional electronic devices used to generate radio waves and microwaves, requiring the development of new devices and techniques.

Because the terahertz portion of the EM spectrum is located between microwaves, where we have already discussed their skin-heating and

potential to damage DNA (which not materializing monsters from the subconscious as was alleged at Montauk), and the near infrared area (down below 1000 nm) these waves are getting a lot of attention.

One reason is they allow you to “see through” things. As you’d expect, the medical, military, security, and general scientific interest is very high. But terahertz waves have lots of safety issues:

> “The terahertz region is between the radio frequency region and the optical region generally associated with lasers. Both the IEEE RF safety standard and the ANSI Laser safety standard have limits into the terahertz region, but both safety limits are based on extrapolation. It is expected that effects on tissues are thermal in nature and, therefore, predictable by conventional thermal models. Research is underway to collect data to populate this region of the spectrum and validate safety limits.
>
> A study published in 2010 and conducted by Boian S. Alexandrov and colleagues at the Center for Nonlinear Studies at Los Alamos National Laboratory in New Mexico created mathematical models predicting how terahertz radiation would interact with double-stranded DNA, showing that, even though involved forces seem to be tiny, nonlinear resonances (although much less likely to form than less-powerful common resonances) could allow terahertz waves to "unzip double-stranded DNA, creating bubbles in the double strand that could significantly interfere with processes such as gene expression and DNA replication". Experimental verification of this simulation was not done. A recent analysis of this work concludes that the DNA bubbles do not occur under reasonable physical assumptions or if the effects of temperature are considered. It should also be noted that the T-ray intensity drops to less than 1% in the first 500 μm of skin.”

Even so, this unique ability of T-Waves to get down into the DNA country might, with future development, become part of a process we’d label *genetic customization*.

There’s an important moral hazard to be discussed, though, when we start edging back into the field of Eugenics. Recall what happened to the Nazis at

Nuremberg when their experiments came to light. Tinkering with *genetic* purity, it could be argued, is akin to *breeding a Master Race*.

Thanks, we'll stick to Natural Selection, around here.

Whew! Quite a topic this Light, Light Crown, and terahertz stuff, huh? How about we take a break and head up to Canada for a while?

13. The Hutchison Effect and Experimental Methods

[**High-level:** Like good (intellectual) crime scene investigators, we're tossing a lot of ideas onto the "evidence table" all at once. Perhaps not with such a broad scope, there are, we notice, already informal personal research efforts ongoing…]

If I were to pick three groups that I think are ripe to hit *The Big Breakthrough* and pop over into *Dimensions Next Door* (other than our own experiments in *Old Man Labs*) one of the short-list would be John Hutchison.

Why?

Because he's doing the exploratory *science* that establishment Science is not doing much of.

He is *deliberately* putting out various *frequencies* at *various power levels* and looking for anomalous effects. But his method of doing so seems more oriented in the direction of Tesla work, as opposed to systematic multispectral field analysis.

The *RationalWiki* site offers this view of the Hutchison Effect:

> "While attempting to recreate the experiments of Nikola Tesla in the late 1970s, Hutchison claims to have discovered many new phenomena, primarily manifesting in metals. The effects of his experiments supposedly included metal objects floating to the ceiling, shattering, becoming warm, and fusing with other objects and other interesting manifestations. These disparate manifestations are all lumped together under the name "Hutchison Effect". Explanations of the effect rely heavily on technobabble, especially referencing zero-point energy and the Casimir effect.
>
> In particular, Hutchison claims to have invented batteries (called "Crystal Batteries" or "Hiroshima cells") which are capable of creating free energy. This technological revolution, which has the potential to change the world around us is yet another example of Hutchison's extraordinary work going unappreciated. It's certainly odd too, when

> one considers that no other scientific breakthroughs have been blocked in such a way in democratic countries such as Canada and that making such a breakthrough would make a person a billionaire.[181]

Conveniently, Hutchison operates a website where a lot of his past interviews are available for review[182]. However, the *Skeptic's Dictionary* describes Hutchison as a "Hoax" and reports:

> "One suggestion made by skeptics is that Hutchison uses an electromagnet on the ceiling, and places hidden pieces of metal inside objects so they will be attracted to the magnet. He could then film the objects with an upside-down camera as he powers down the electromagnet, making the objects on film appear to float up and out of the shot when in reality they are falling down to the floor. Many of the videos include conspicuous objects in the scene which do not move (such as an old broom), which could be deliberately attached to add to the illusion that the camera is not upside-down. Critics also point out that the videos do not show what happens to the objects after they levitate.[183]

It has been reported that Hutchison was invited several times to repeat the phenomena he claimed, but was unable to do so under controlled conditions.

While that is likely the case, the Hutchison Effect is worth considering since it *may be possible* that anomalous effects could have arisen due to externalities that Hutchison may not have included in his work.

Interestingly, Hutchison's work gets us into the realm of Tesla and that, in turn, gets us into the "free energy" world.

"Statitronics" Experiments

One of the disappointments I have with much "home-spun science" on the Internet is that it is not very well *documented*.

In 2004, I was attracted to investigate how much power could be derived from a Tesla-like approach to "*splitting the dielectric*."

The result was 69-pages of notes and diagrams on my work looking for free energy. I offer this series of experimenters in contrast to experimenters like Hutchison. A section of my lab notes is included as Appendix 2.

The whole point of lab notes is so that if anything happens, you will be able to recreate the same conditions that resulted in an effect. I haven't seen Hutchinson's work do this in sufficient detail to where anyone (*skilled in the arts* in the term patent attorneys use) could replicate his claims.

As should be apparent, my 2004 didn't result in anything that was useful. I could, however, go back 13-years later and read about what parts I used so there would be no question about method.

> "Each of the rectifier configurations will be used to charge a large electrolytic capacitor (rated 4700 uF at 35 WVD.C.). Rectifiers in all cases will be 1N914 type small signal diodes (Radio Shack 276-1620 or equivalent).

And this is the kind of rigor and detail that really matters in Science.

As an aside, as part of this experiment, I did set up an interesting data recording session where I looked at the voltages coming off my vertical antenna and these would rise and fall (for reasons that were non-apparent) during the day. I noted that *sometimes* these voltages would *seem* to correspond to movements in the stock market on a short-term basis, but not with a high enough degree of regularity that it evolved into a workable trading system.

The lack of a Porsche GT3 in the driveway of our mansion (instead of a doublewide with an old Lexus) would seem to back up that conclusion.

Next stop?

Why, the graveyard, of course!

14. EVP's & Edison's Dead

[**High-level:** While unorthodox approaches haven't yielded "*The Big Breakthrough*" (yet), another type of *spectral investigation* is underway with the objective of "talking to dead people." It would sound totally macabre, if one of the earliest researchers wasn't so damn famous…]

In October of 1920, Thomas A. Edison, better known as the father of lights, announced to reporters that he had invented a "*spirit phone*."

Edison has been in communication with a British inventor, Sir William Crookes, who claimed to have captured dead "spirit images" on a new device he was building.

By then, Crookes, born in 1832, had died – in 1919. But not before putting Edison onto the scent. Crookes was busily inventing things and had been tinkering with radiations of one sort, or another[184]:

> "In 1861, Crookes discovered a previously unknown element with a bright green emission line in its spectrum and named the element thallium, from the Greek thallos, a green shoot. Crookes wrote a standard treatise on Select Methods in Chemical Analysis in 1871. Crookes was effective in experimentation. The method of spectral analysis, introduced by Bunsen and Kirchhoff, was received by Crookes with great enthusiasm and to great effect. His first important discovery was that of the element thallium, announced in 1861, and made with the help of spectroscopy. By this work his reputation became firmly established, and he was elected a fellow of the Royal Society in 1863.
>
> He developed the Crookes tubes, investigating cathode rays. He published numerous papers on spectroscopy and conducted research on a variety of minor subjects. In his investigations of the conduction of electricity in low pressure gases, he discovered that as the pressure was lowered, the negative electrode (cathode) appeared to emit rays (the so-called "cathode rays", now known to be a stream of free electrons, and used in cathode ray display devices). As these examples indicate, he

was a pioneer in the construction and use of vacuum tubes for the study of physical phenomena. He was, therefore, one of the first scientists to investigate what is now called a plasma and identified it as the fourth state of matter in 1879. He also devised one of the first instruments for studying nuclear radioactivity, the spinthariscope.

Crookes investigated the properties of cathode rays, showing that they travel in straight lines, cause fluorescence when they fall on some substances, and that their impact can produce great heat. He believed that he had discovered a fourth state of matter, which he called "radiant matter", but his theoretical views on the nature of "radiant matter" were to be superseded. He believed the rays to consist of streams of particles of ordinary molecular magnitude. It remained for Sir J. J. Thomson to expound on the subatomic nature of cathode rays (consisting of streams of negative electrons). Nevertheless, Crookes's experimental work in this field was the foundation of discoveries which eventually changed the whole of chemistry and physics.

Crookes' attention had been attracted to the vacuum balance in the course of his research into thallium. He soon discovered the phenomenon which drives the movement in a Crookes radiometer, in which a set of vanes, each blackened on one side and polished on the other, rotate when exposed to radiant energy. Crookes did not, however, provide the true explanation of this apparent "attraction and repulsion resulting from radiation".

It is critically important to assessing Crookes work that you understand that “cathode rays” were found to be X-rays. It’s just Crookes didn’t know it at the time. So, it fell to a German fellow to pick up the scent in 1895:

> German physicist Wilhelm Röntgen is usually credited as the discoverer of X-rays in 1895, because he was the first to systematically study them, though he is not the first to have observed their effects. He is also the one who gave them the name "X-rays" (signifying an unknown quantity) though many others referred to these as "Röntgen rays" (and the associated X-ray radiograms as, "Röntgenograms") for several decades after their discovery and even to this day in some languages, including Röntgen's native German[185].”

Even today, the Röntgen is a standard unit of radiation exposure. And just how much is a Röntgen?

> "It was last defined by the US National Institute of Standards and Technology (NIST) in 1998 as 2.58×10−4 C/kg, (i.e. 1 C/kg = 3876 R) with a recommendation that the definition be given in every document where the roentgen is used. One roentgen of air kerma (kinetic energy released per unit mass) deposits 0.00877 grays (0.877 rads) of absorbed dose in dry air, or 0.0096 Gy (0.96 rad) in soft tissue. One roentgen (air kerma) of X-rays may deposit anywhere from 0.01 to 0.04 Gy (1.0 to 4.0 rad) in bone depending on the beam energy. This tissue-dependent conversion from kerma to absorbed dose is called the F-factor in radiotherapy contexts. The conversion depends on the ionizing energy of a reference medium, which is ambiguous in the latest NIST definition. Even where the reference medium is fully defined, the ionizing energy of the calibration and target mediums are often not precisely known.[186]"

Rad, huh?

While it may have been possible that Crookes was stumbling into what would later be called X-rays, the Edison Spirit Phone was an apparent bust. Although, according to some reports, Edison's spirit told a séance in 1941 that three of his lab assistants had the plans but when built it didn't work. At a later séance, Edison supposedly passed through the improvements and some of these were taken up by the inventor J. Gilbert Wright, who joined Edison in the *Great Hereafter Labs* in 1959 without being able to get a call though from one side of *the Veil* to the other[187].

Is EVP Real?

Here's another one of those odd step-children of the electromagnetic spectrum. Electronic Voice Phenomenon, or EVP's for short.

Theory has it (and there are many supporting videos on YouTube) that if you have a decent "white noise" source – like static coming out of a shortwave radio – and you set up a recorder across the room, you will, upon playback, often hear words and occasional phrases.

The Wikipedia entry on EVP has some of the early history[188]:

> "American photographer Attila von Szalay was among the first to try recording what he believed to be voices of the dead as a way to augment his investigations in photographing ghosts. He began his attempts in 1941 using a 78-rpm record, but it wasn't until 1956, after switching to a reel-to-reel tape recorder, that he believed he was successful. Working with Raymond Bayless, von Szalay conducted a number of recording sessions with a custom-made apparatus, consisting of a microphone in an insulated cabinet connected to an external recording device and speaker. Szalay reported finding many sounds on the tape that could not be heard on the speaker at the time of recording, some of which were recorded when there was no one in the cabinet. He believed these sounds to be the voices of discarnate spirits. Among the first recordings believed to be spirit voices were such messages as "This is G!", "Hot dog, Art!", and "Merry Christmas and Happy New Year to you all". Von Szalay and Raymond Bayless' work was published by the Journal of the American Society for Psychical Research in 1959. Bayless later went on to co-author the 1979 book, Phone Calls from the Dead.
>
> In 1959, Swedish painter and film producer Friedrich Jürgenson was recording bird songs. Upon playing the tape later, he heard what he interpreted to be his dead father's voice and then the spirit of his deceased wife calling his name. He went on to make several more recordings, including one that he said contained a message from his late mother.

Raudive voices

Konstantin Raudive, a Latvian psychologist who had taught at the Uppsala University, Sweden and who had worked in conjunction with Jürgenson, made over 100,000 recordings which he described as being communications with discarnate people. Some of these recordings were conducted in an RF-screened laboratory and contained words Raudive said were identifiable. In an attempt to confirm the content of his collection of recordings, Raudive invited listeners to hear and interpret them. He believed that the clarity of the voices heard in his recordings implied that they could not be readily explained by normal means, Raudive published his first book, Breakthrough: An Amazing Experiment in Electronic Communication with the Dead in 1968 and it was translated into English in 1971."

My own interest in EVP's didn't start until my eldest daughter called me one day to inform me that she would be going to a graveyard that might to "*talk to the dead*." In a big city, like Seattle, going to a graveyard on Capitol Hill was not exactly the smartest thing I could think of a young woman doing at night.

In the end, it worked out fine and she got several recordings that could be interpreted as "voices."

Armed with her experience, I set about making some recordings myself.

The equipment set-up was simple: A small cassette recorder that used microcassettes and a 2-meter ham radio that was placed at the far end of the room.

I sat in the room as silent as could be for about 20-minutes and then stopped the tape. The squelch was opened on the radio – proving the white noise – and recording began

On playback, there were several "noises" present that we not on the original recording, but they were not easily construed to be words.

Following a bit of investigation, I came up with a working theory. The short version of it is that whatever these "noises" were, it seemed that EVP aficionados were recording more of the sounds using equipment which

included a 40-kilohertz oscillator of analog-to-digital (A/D) converter operating at moderate speeds. 38-44 KHz conventional tape biasing seems to work even better, by some reports.

My own experiments found the noises were not sufficiently compelling at the time to spend more energy on the subject, except read a few books and note the frequencies involved.

Anabela Cardoso's book, "*Electronic Voices: Contact with Another Dimension?*[189]" was worth the reading time for several reasons.

The first was for her description of another "realm" where people, formerly of this world, had gone in a subsequent existence.

It seemed that one of the projects going on in *that* realm was the construction of some sort of "transmitter" which had the objective of being able to "talk-back" to this dimension.

Since I had already begun to collect notes for a wide-spectrum approach to physical reality, this was a very useful point to pick up.

So were her descriptions of this "next realm" as being a place where *color* is almost overwhelmingly important. Sure, in this world, touch/tactility is important, along with taste, and so forth. Make a note to ask after you die: Does color matter?

Above all, though, the emphasis on *color*.

This resonated at some level with me: I was already used to being in a studio setting where an artist or producer would use phrases like "*…make it a little bluer…and give me some reds…*" Audio engineers evolve a special language with artists and producers over time. When someone says "*…bluer…*" it could mean to pitch-shift down a fraction *or* it could mean make the "groove" wider.

The "groove" is the main rhythm of a song. And a good drummer, for example, can play the tiniest bit ahead of the groove, just behind it, or spot on. If they can't (or if you don't like how they've gone it and you're the producer) you just adjust the time base of the drum track to give a track the "vibe" you're after.

That's a long description of *color* used as a concept, but in the EVP books I've seen so far, this after/other life is very much a place of color rather than tactile senses. It is very similar to a hallucinogenic experience, it made me wonder: Is death a *good* trip or *bad* trip deal?

Whether this makes sense, or not, depends on how much effort you want to put into categorizing your six senses (counting *intuition*[190]). The exercise goes like this: What is the "lowest-vibration sense" if you had to pick one of your senses?

Upon sorting out your senses in this manner, you *might* be able to infer a *possible* hierarchy that *might* explain how other dimensions are organized. But there's no "money back guarantee" on any of this stuff!

15. A Short Phenomenon Recap

[**High-level:** Time for a beer-brake while we let some of our findings sink in.]

In these opening chapters, we have covered most of the electronic spectrum, literally from D.C. (direct current) to daylight. And in fact, even a bit beyond daylight.

In each of these segments of spectrum we have found some interesting effects that catch our eye.

Close to D.C. (direct current) there is spectrum "next door" to the "*Dead Condition.*" Very low voltages and very low frequencies are involved.

There is no shortage of anecdotal medical evidence, collected by exceptional professionals, that details a trans-cultural, common response to the near-death condition.

Moving up spectrum into the HF band (3-30 MHz), I retold my personal encounter with an odd electronic phenomenon, the Long-Delayed Echo, or LDE.

Then we looked, again, at the super low frequency range, tens to thousands of kilohertz, and we considered that the Earth emits huge amounts of electrical energy because of twisting and bending of its crust, especially in regions above sea level; on the *high side* of subduction zones.

Part of his discussion questioned assertions like "Easter Island being a vile vortex." Alternatively, we found plenty of oddities on the high-side up thrust zone at Nazca, Peru.

Our attention then turned to the Bruce Gernon flight of 1970 and the reported space-time anomaly because it is not only well-documented, but also because we have been able to directly ask Bruce some questions not pursued in other books. These relate to the electronics on his A36 Beech Bonanza and the proximity of a high-power, frequency-agile radar at the Navy AUTEC facility on Andros Island in the Bahamas.

Our next adventures in spectral analysis led to the data collection surrounding

the [alleged] Philadelphia Experiment. Our judgement was this may have been a confabulation of 1943 degaussing technology experiments blended by verbal tradition with later work on the U.S.S. Timmerman. In this case, 400 Hz shipboard power was replaced with 1000 Hz equipment. All of which would be fine, *except for the fact* that it's one of those experiments that doesn't make sense. The Navy's dismissal of the Timmerman case because of high voltage "coronas" is simply too improbable unless another – *yet to be disclosed* – series of experiments was taking place.

Similarly, there is a great deal to be observed around the so-called Montauk Project. Although it may not be connected to a U.S. Navy experiment in 1943 in Philadelphia, or the USS Eldridge, we are intrigued by the presence of not only multiple radars, use of the base as a highly security research and development facility, but also the presence of a major submarine yard less than 20-miles distant.

Montauk is problematic from a witness standpoint, with only two witnesses making the claims and little hard evidence at hand.

Moving up spectrum, we looked at photo biomodulation, cycled light healing, some of my own experimental work in "light pumping" of the trigeminal nerve bundle and the deep brain with 660-1000 nm near-infrared (NIR) light.

From there we looked at other spectra including the terahertz wave range between microwaves and NIR light, as well as up past white/daily to the ultraviolet spectrum and beyond.

Then we considered the work of John Hutchison, who in our view may be on the correct path to discovery; seeking odd phenomenon through interacting wave fronts at assorted frequencies.

We wrapped up the data survey with a discussion of Thomas Edison's "machine to talk to the dead" and how Sir William Crookes' claims of seeing disembodied persons could have been early - *accidental* - encounters with X-rays. Honors for which would go to Roentgen circa 1895.

And last, we considered the odd relationship of electronic voice phenomenon which seem to happen only when a certain frequency of oscillator is used.

We can now press on to the second portion of this book, a discussion of

specific electronic phenomenon already known, and how these may – and may not – account for the data we've accumulated.

Part 2: Application of Electronic Fundamentals

16. Mixers, Heterodynes, Superheterodynes: Why They Matter

[**High-level:** In order to effectively postulate how various phenomenon might operate – and then how they might be manipulated – there's a great set of "thought templates" available in General>Electronics>Receivers>Design. We use *templates* from multiple disciplines as part of my Substitution Method of Leaning."

All of humankind is familiar with the concept of *vibration*.

If you strike sharply down on one end of a long jump rope, you can see a "wave"
of energy travel to the distant end and then return to the starting point.

There is a related effect here: If, instead of rope, a taut string is used, and it is coupled at each end firmly to a small diaphragm, such as a paper cup, the voice vibrations will be transmitted over the tight string and be heard at the far end.

Armies are schooled on how to "break cadence" when crossing small suspension bridges in order not to induce synchronized stresses from strict-ordered marching that could destroy the bridge. Nikola Tesla had claimed that he would bring down buildings (and some accounts claim bridges) with such synchronized waves, but there is little evidence he ever did so.

Vibration works at the *human* level, too. Some people have higher "vibrations" than others. These people may be considered "enlightened" because they have "moved toward the light." Others, perhaps including satanic advocates, are classed as a "lower" vibrational group. You'd expect from this distinction that Heaven is a high vibratory state, while Hell is far lower; at least so dogma argues.

Electricity is a different matter. There are two states. The direct current (D.C.) as comes from an electrochemical battery, and alternating current

(AC) promoted very successfully by George Westinghouse in the early days of lighting.

Thomas Edison has favored a system by which Direct Current would be used for lighting. Westinghouse (and Tesla) favored alternating current. In fairness to each, a case could be made either way.

The good news about D.C. is simple: It stays in the wire – like good electricity is supposed to. The bad news about AC, in this regard, is that any time electricity changes directions, it creates an E-wave (voltage) and an M-wave (the magnetic component).

None of this was clear science in the early-adoption period of electricity, as making any substantive difference. However, in 1989, Paul Brodeur wrote a book that focused world attention on this matter of Alternating Current that gets radiated. The Amazon summary of the book explains, in part[191] :

> "Controversy over the potential hazards of electromagnetism from neighborhood power lines has moved from the lab to the courts, as school districts and community groups mount protests or lawsuits against utility companies. New Yorker staff writer Brodeur convincingly argues that evidence exists that exposure to such radiation may cause cancer and other illnesses. Low-level microwave radiation poses another danger, he compellingly shows, as Cape Cod, Mass., residents discovered when an Air Force radar station built in the vicinity apparently led to abnormally high levels of cancer."

This was accompanied by many people coming forward and telling the medical profession that they believed they were susceptible to electromagnetic spectral effects. Just recently, a paper was published (Human exposure to pulsed fields in the frequency range from 6 to 100 GHz[192]) explaining the need for exposure limits in this range which approaches the terahertz region:

> "Restrictions on human exposure to electromagnetic waves at frequencies higher than 3-10 GHz are defined in terms of the incident power density to prevent excessive temperature rise in superficial tissue. However, international standards and guidelines differ in their definitions of how the power density is interpreted for brief exposures.

> This study investigated how the temperature rise was affected by exposure duration at frequencies higher than 6 GHz. Far-field exposure of the human face to pulses shorter than 10 s at frequencies from 6 to 100 GHz was modelled using the finite-difference time-domain method. The bio-heat transfer equation was used for thermal modelling. We investigated the effects of frequency, polarization, exposure duration, and depth below the skin surface on the temperature rise. The results indicated limitations in the current human exposure guidelines and showed that radiant exposure, i.e. energy absorption per unit area, can be used to limit temperature rise for pulsed exposure. The data are useful for the development of human exposure guidelines at frequencies higher than 6 GHz."

This is, of course, closely related to the safety of WIFI networks in the home. If you knew, for example that FDTD means *frequency-difference time domain* studies, then "FDTD assessment of human exposure to electromagnetic fields from Wi-Fi and Bluetooth devices in some operating situations[193]" might be just your cup of tea. It explains the home WIFI is probably safer than the transmitter in your cell phone which is, oh yeah, right next to that trigeminal nerve bundle I was tinkering with the Light Crown project.

> "In this work, the numerical dosimetry in human exposure to the electromagnetic fields from antennas of wireless devices, such as those of wireless local area networks (WLAN) access points or phone and computer peripherals with Bluetooth antennas, is analyzed with the objective of assessing guidelines compliance. Several geometrical configurations are considered to simulate possible exposure situations of a person to the fields from WLAN or Bluetooth antennas operating at 2400 MHz. The exposure to radiation from two sources of different frequencies when using an 1800 MHz GSM mobile phone connected via Bluetooth with a hands-free car kit is also considered. The finite-difference time-domain (FDTD) method is used to calculate electric and magnetic field values near the antennas and specific absorption rates (SAR) in a high-resolution model of the human head and torso, to be compared with the limits from the guidelines (reference levels and basic restrictions, respectively). Results show that the exposure levels

> in worst-case situations studied are lower than those obtained when analyzing the exposure to mobile phones, as could be expected because of the low power of the signals and the distance between the human and the antennas, with both field and SAR values being far below the limits established by the guidelines, even when considering the combined exposure to both a GSM and a Bluetooth antenna."

What comes into focus is that humans are already receiving lots of radio frequency (and microwave) radiation. Toss in some solar flares, a "naked scanner" at the airport and that new cell phone and we have absolutely *no idea* what is being done to the human genome over time from this subtle, yet pernicious, electronic attack.

I haven't had the inclination to tell a dear friend who works servicing radios about some of the more recent research, though. Like the paper "*Radiofrequency radiation (900 MHz)-induced DNA damage and cell cycle arrest in testicular germ cells in swiss albino mice*.[194]"

The obvious answer, if we were doing stand-up comedy, instead of serious home-based science, would be to keep swiss albino mice away from the electronics bench when we're working on ISM systems in the 900 MHz range. Simple.

Similarly, a 2015 paper "*Habits of cell phone usage and sperm quality - does it warrant attention*?[195]doesn't sound a loud alarm, but the topic is worth a government commitment to a long-term (longitudinal) study.

Mixers Are Meaningful

There are only a few basic configurations of radio receivers.

One class – from whence the basic crystal radio arose – was called the "tuned radio frequency or TRF – type receiver. If a station was at, for example, 1,000 KHz (1 MHz, middle of the AM radio dial) the radio would amplify the signal right on that frequency and feed it into a detector.

Early receivers were not particularly *selective* because *selectivity* is from essentially filtering out adjacent signals.

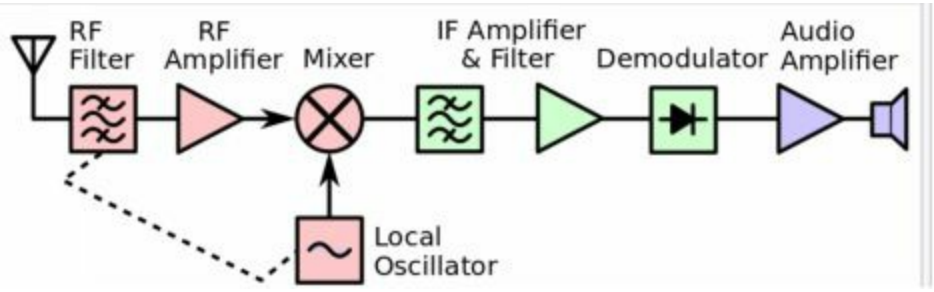
Coils in radios are measured in terms of their "sharpness" by looking at their "Q." Short for *quality* of a tuned circuit, this may be dramatically improved by applying *almost* enough energy to an amplifier section of a TRF receiver to induce feedback.

This process, called *regeneration*, and in the hands of a skilled user, regenerative radios are quite surprising for their low component counts.

Beginning in the 1920's, however, a new kind of receiver was introduced. It used what amounted to an incredibly sensitive – but *fixed-tuned* radio – to which a "local oscillator and mixer" were added.

"Mixing" is what happens when *two* radio signals are combined under adult supervision. One frequency (usually a desired radio frequency) is *beat* against another (local oscillator) and the *sum*, or *difference*, is used.

Now imagine how this would be applied to the "fixed-tuned [or tuned-radio-frequency, TRF] receiver." The TRF section is renamed because it has been deprecated to become middleware of the new radio design. The remnant TRF radio is called the *intermediate frequency* or *IF* section. It was just ahead of the detector and audio amplifier, and the result is a block diagram of a *superheterodyne* receiver[196]:



Take away those items in red on the left, and you can see how the “IF Amplifier” is nothing more than a TRF receiver.

On the earliest of superheterodynes, there wasn’t an RF filter or an RF amplifier. These improve the quality of a receiver, particularly aboard a competition-grade amateur radio unit. These may involve double, triple, and even quadruple conversion stages, the advent of the RF amplifier and added tuned circuits in the receiver’s “front-end” (the part of the radio closest to the antenna, also called an “aerial” in the old days) is an interesting story.

The most common intermediate frequency used in low frequency radios, has been 455 Kilohertz. To understand how the mixer and oscillator work, let’s tune in that station you want on 1 MHz.

You hook up your antenna. This feeds a small signal into the mixer. And you set a local oscillator (the tiniest transmitter you can imagine) to 1,455 KHz.

This *mixes* in the *mixer* and puts out two signals.

One signal is the 1,455 KHz local oscillator MINUS the 1000 KHz desired signal. This pushes the difference (at 455 KHz) through the TRF stage (which by convention is called the *IF section*).

The other signal is the 1,455 KHz local oscillator PLUS the 1000 KHz desired signal. This presented the SUMMATION (1,455 + 1,000) which is 2,400 KHz to the intermediate amplifier (a super Tuned RF radio). Because there is such a HUGE difference in frequency, the intermediate stages easily reject the *image* and deliver only the desired signal to the detector stage.

Oh… the story. Almost forgot!

Because that 1, 455 KHz signal is the smallest imaginable transmitter, *SOME* of the local oscillator signal “leaked back out” to the antenna. It didn’t take the Germans long to figure out that if you wanted to find a ship, just tune around with your best and most sensitive radio (equipped with a direction-finding antenna) scanning the frequencies that target ships might be listening

to. If you knew the weather was broadcast every day on 500 KHz, for example, you would list on the frequency of 500 KHz PLUS the 455 KHz intermediate amplifier frequency.

How many ships were lost because the Germans figured this out (listening on 955 KHz in the example), will never be known.

Americans, figuring out what the Germans were figuring out, discovered that by adding an "antenna circuit amplifier" stage, that the transmitter leakage was essentially halted. Some radios from the era of the 1940's and 1950's went to exceptional design lengths by including not one but *two* antenna (RF) amplifier sections. The National 173 (first released in 1947) is one example of such a set. The NC-173, by the way, is the radio used by explorer Thor Heyerdahl on his Trans-Pacific raft voyage on the *Kon-Tiki*[197].

When you open an old superheterodyne (super-het) radio, you can tell whether there is an RF amplifier section by simply looking at the ganged tuning capacitor. That's the big thing that looks like an egg-slicer.

If the "egg slicer" – I mean *tuning capacitor* - has only *two* sections, then there is *no onboard RF* amplifier for the antenna. A radio, such as the Hallicrafters S-38, is an example of such a set[198]. Later, Hallicrafters gear, such as the legendary SX-101 series, were single RF amplifier receivers.

If you remember the old school "all-American five" (tube) radios and clock radios from the 1950's, these were virtually all mixers with direct antenna inputs.

It's easy to remember: Two sections of "egg slicer," no antenna amplifier. Three sections meant one antenna/RF amplifier, and four sections meant two amplifiers.

Why Mixers Matter So Much

Mixers matter because they allow us poor, ill-equipped humans to extend our quite limited senses into other domains not directly accessible.

Think about this: The bat has been using a rudimentary form of ultrasonic radar and converting this data into a "steerable path" for millions of years. Yet, it was not until the invention of *mixers* that we were able to down-convert the previously inaccessible spectrum to "see" useful information. Like that airplane coming at us as we loaf along at flight level 32.

To do this, we use radio direction and ranging (which is what RADAR means), while the bat navigates using ultrasonic audio frequencies.

We know this because *mixer* technology lets us "down-shift" the bat frequencies from 50 KHz down to the 0.1 to 15 KHz most people can hear.

Mixers and microwaves also make it possible for police to "speed gun" us and give us tickets when we're not paying attention to things like school zone signs or pedestrians crossing the street.

There are plenty of other examples of how mixers work. In fiber optics and the newly emerging specialty of photo biomodulation, specific frequencies of light may be made in a "light box/mixer" for applications like arresting the progression of Age Related Macular Degeneration.

There are also terribly important communications aspects of optical mixers. You might be well-advised to put the Stanford Nonlinear Optics paper "*Optical Frequency Mixers Using Three-wave Mixing for Optical Fiber Communications*[199]" on your reading list, although, since it is a 1999 paper, I'm certain you're already up to speed on it….

Once we have *mixers* planted in our heads, and the concept of the super heterodyne radio receiver embedded in our wetware, we can move on to the next Big Concept necessary to follow the logic to the conclusions of this book.

That concept is.

The Art of Multiplexing

If you think it's a bit odd that someone like me was snapped up by RCA Service Company at the age of 18, given a security clearance, equivalent rank of a Major in the military, and sent off to Alaska where a screw-up on my part could cost the company as much as $5,000 per *minute* (and that's in 1968 dollars, so really be thinking of this as $35,000 per minute in 2017 fiat/pretend money), there's really a very simple explanation for it.

I understood multiplexing like the back of my hand.

And now *you* are going to understand it, too. (Don't expect a job out of it.)

We begin with a simple AM radio station. We will use that station on 1,000 kilohertz that we talked about earlier.

You'll need to know that with a 1,000-watt station, the maximum amount of audio you can impress on the signal is a lousy 500-watts worth.

Now it gets worse.

The signal has three major components to it.

There is a lower sideband which runs from 995 KHz on the dial up to 1,000 KHz. This is *one half* of the audio being transmitted. I trust you remember there is a carrier at 1,000 KHz, so that's the second part, right?

The third part is the voice channel from 1,000 KHz on up to 1,005 KHz. This is the "upper sideband."

These sidebands were rolled off at an upper frequency limit of 5,000 Hz (5 KHz). That's high enough to include all the pertinent parts of speech, but when you roll off what is (in musical terms) the D# 7, the violins get muddy and the triangle lose their gliss. If you're not clear on what I mean by "gliss", follow this footnote: [200]

In other words, 1,000 watts of radio *carrier* will support 500 watts of Amplitude Modulation and that will place 250 watts of "talk-power" on the *lower sideband* and the other 250-watts on the *upper sideband*.

The U.S. Air Force was instrumental in the evolution of *single* sideband. That's where you take *either* the upper or lower sideband and transmit just

the audio. It requires a special detector section - another local oscillator/mixer variation. Only this mixer/oscillator was called a *product detector*.

With the backing of powerful forces in Congress (Senator Barry Goldwater was K7UGA and yes, we talked…) *single sideband* became the backbone of survivable communications during much of the Cold War.

At age 18, I had all this stuff down cold and applied to the business end of a soldering iron because I was working as a broadcast engineer – a gig I landed before graduating from high school.

Point is, there were not too many people (then or now) who a) understood single sideband and who b) understood L-plan frequency multiplexing.

Since you now, however *vaguely*, know how mixers work, plus understand the three parts to an AM radio signal (lower sideband, carrier, upper sideband), not to mention knowing what single sideband is, you have all you need to become a multiplexing expert.

Let me give you a radio. A small microwave transceiver called a Philco CLR-9. It is a very *broadband FM* transceiver.

FM stands for *frequency modulation* and unlike AM, where audio response "rolls off" at 10 KHz or less, FM may be modulated many *megahertz* wide. FM allows ingenious spectrum use. You can "stack" (multiplex) more than 300 voice-grade channels into 1 MHz of spectrum and transmit it over microwave.

This is precisely why you can still see remnants of the old AT&T terrestrial microwave system around the country. That's how voice channels were moved prior to fiber optics coming along.

Let's get to the task at hand: We are going to "stack" multiple "sidebands" and then send the whole mess over an FM signal.

You can't do this with AM because the *sidebands* become far too wide for the lousy TRF receiver (the *intermediate frequency or IF strip*) of an AM radio.

FM radio is special: There is almost no limit to how much information can

be “stacked, transmitted, received, and decoded” on FM.

To do the “stacking” we will use a simple 5 KHz oscillator to stack our first two single sideband signals. This means we are stuck at 200 channels for 1 MHz of FM bandwidth.

If you were listening to the raw FM, it would sound terrible, but there would be one audio channel at 0-5 KHz, the first stacked signal would be from 5 to 10 KHz, the third from 10 to 15 KHz, and another from 15 to 20 KHz, and so forth.

Rinse and repeat with [*x*] channels of data using a big multiplexing box like the Lenkurt 45-series, and suddenly, you have a happy government contractor. Not to mention a happy “Pine Tree Line,” a happy “DEW Line,” and a happy Colorado Springs. Everyone was happy.

With *Frequency Division Multiplex* now clearly in your head (stack single sideband signals up: Oscillator to convert up, mixers to down convert) and everything is peachy…. we can move up.

Let’s say, after all the stacking, you didn’t have enough channel capacity… what then?

Enter *time division multiplexing*.

This is a little different, so I’ll make it easy on both of us.

Let’s take two channels.

On voice channel number 1, pretend you’re saying the word “test.” Now we *time slice* that just like a loaf of white bread.

With the word sliced, we don’t have to transmit the *whole loaf*, just a good enough *sample rate* that your ear will “get it.” A few thousand samples per second is good enough.

In electronic terms, that’s not many slices!

Now, on voice channel 1 says “White bread.”

On voice channel #2, I say the word “Swiss Cheese!” Your challenge is to send both word pairs on the same channel.

It takes a different box now because we are transmitting (and decoding)

alternating *time slices*.

Congratulations, you have just mastered *time-division multiplexing*.

Oh, oh…Elaine wants to say, “Corned Beef!” I also want to say “*Mustard!”*

By the time we’re done, we only need four time-slices (Rye, cheese, corned beef, and mustard) to order a Reuben sandwich!

Stack by *frequency* or stack by time slices.

Doggonit if you’re not ready for a degree in smarts. We can now move into the final part of the book. The hard part. Maybe toss in a few slices of dill and some beer, too.

Part 3: Analysis and Exploration

17. Life and Death as a "Frequency Matrix"

[**High-level:** With some understanding of electronics, it's time now to do some "test fitting" of the data to see if "anything sticks."]

Now that you know a good bit about frequencies, let's put some of this into a spreadsheet so we can look at these phenomenon in a methodical way.

Near-Death Experiences

We know the human brain is a low-frequency, spectrally-diverse, bit of wet-ware. We aren't sure how it secretes a strong hallucinogen while dying (DMT) but that does alter brainwave frequencies.

Normal waking consciousness lives in the 12.5 Hz to 30 Hz "Beta" brainwave state. Down at 0.5 to 5 Hz, we find the "Delta" brainwaves. These generate slow way sleep of the generally non-rapid eye movement (NREM) type. Gamma is in the scale at 30-75 Hz.

Theta waves in the 5-10 Hz region are where you'd hang out in search of rapid-eye movement (REM) during sleep. It is also where you'll bump into lucid dreaming and even occasional precognitive dreams. This state can be somewhat learned and tweaked with certain vitamin blends[201] designed for dream enhancement.

Alpha waves reside in the 7.5 to 12.5 Hz spectrum and doesn't show up until about age 3 in humans[202]. It is like, but differentiated from the *mu* wave[203] which is mainly in the 9-11 Hz spectrum.

What makes the bundle of human brain waves so interesting is that a) their frequency depends on location within the brain, b) their periodic *entrainment* (characterized by resynchronization) and c) varying by psychological states.

To put it into perspective, we have a "Chicken or Egg?" problem in all of this: Does brainwave activity arise from *persona* or does *persona* create the waves in the physical substrate?

Either way, we can ponder this one a bit as a "mixer" type problem and it is possible that in order to create certain physical effects, the brain may employ a kind of "biological multiplexing" in order to disperse (and recall) concepts,

ideas, and memories from a large – almost holographic – collection of cell structures.

This ability is both a blessing and a curse.

In 2012, an article in *Psychology Today*[204] began to focus media attention on the issue of "false memories." As you know, false memories are very contentious in cases where a violent crime has occurred.

In 2013, *Science*, the house magazine of the American Association for the Advancement of Science, explained "Creating a False Memory in the Hippocampus." Highlighted as a paper abstract from Ramirez, *et al*[205]

> "Memories can be unreliable. We created a false memory in mice by ontogenetically manipulating memory engram–bearing cells in the hippocampus. Dentate gyrus (DG) or CA1 neurons activated by exposure to a particular context were labeled with channelrhodopsin-2. These neurons were later optically reactivated during fear conditioning in a different context. The DG experimental group showed increased freezing in the original context, in which a foot shock was never delivered. The recall of this false memory was context-specific, activated similar downstream regions engaged during natural fear memory recall, and was also capable of driving an active fear response. Our data demonstrate that it is possible to generate an internally represented and behaviorally expressed fear memory via artificial means."

This spectral range (0.5 Hz to perhaps 70 Hz) would not only bear on experimental designs looking at the death and dying processes, but they would have distinct military applications as well.

Since there are only a certain number of ways to implant low audio spectrum energy into a person's head, we have discussed *mixers* enough now that we can explore some potential delivery routes.

One method would be use of microwave energy. So, just based on equipment availability, it seems the rumored Montauk Experiments could conceivably have some basis in fact. This is because at low to moderate power levels, microwave can penetrate *some* distance into the human brain.

Down-spectrum, *Holosonic Labs*[206] is using colliding ultrasonic wavefronts to create 'sound of out air' using frequency mixing described earlier[207]. Less biological risk than microwave-based approaches.

Another *mixer* configuration would be to modulate near infrared (NIR) light. This would be a preferred method since NIR skeletal penetration can be on the order of 1-3 centimeters. Evidence of this was presented by Henderson and Morries[208] in 2015:

> "Our recent tissue studies demonstrate no penetration of low level NIR energy through 2 mm of skin or 3 cm of skull and brain. However, at 10–15 W, 0.45%–2.90% of 810 nm light penetrated 3 cm of tissue. A 15 W 810 nm device (continuous or non-pulsed) NIR delivered 2.9% of the surface power density. Pulsing at 10 Hz reduced the dose of light delivered to the surface by 50%, but 2.4% of the surface energy reached the depth of 3 cm. Approximately 1.22% of the energy of 980 nm light at 10–15 W penetrated to 3 cm. These data are reviewed in the context of the literature on low-power NIR penetration, wherein less than half of 1% of the surface energy could reach a depth of 1 cm. NIR in the power range of 10–15 W at 810 and 980 nm can provide fluence within the range shown to be biologically beneficial at 3 cm depth. A companion paper reviews the clinical data on the treatment of patients with chronic TBI in the context of the current literature."

While we're on the topic of brain operation and frequencies, there is one more aspect of flow-frequency spectrum worth considering, though this is in the visual spectrum: Flicker Vertigo.

Most often experienced by pilots, especially when landing into a setting sun and viewing the desired landing path, through a slowly rotating propeller (500-1,000 RPM, 2 blades for a flicker rate of 1,000 to 2,000 times per *minute),* which translates to 16.67 to 33.33 Hz pumping of the visual cortex) the effect is also cited in video game visual addiction and epileptic seizures.

In the 1994 paper "Video game induced seizures[209]" we read in part:

> "Fifteen patients who experienced epileptic seizures while playing video games are described together with a review of 20 cases in the English literature. Nine of the 15 cases and all but two of the reported

> cases experienced their first seizure while playing video games. Two thirds of patients had idiopathic generalized epilepsy and mainly reported generalized tonic clonic seizures, but some had typical absence seizures and myoclonic jerks while playing video games. In this series, 30% with idiopathic generalized epilepsy had juvenile myoclonic epilepsy. Overall, 70% of patients with idiopathic generalized epilepsy were photosensitive to intermittent photic stimulation and the mechanism of seizure provocation was probably similar to that of television induced seizures, although sensitivity to specific patterns was sometimes important. Two children had self-induced video game seizures. Non-photic factors such as excitement, fatigue, sleep deprivation, cognitive processing, and diurnal variation in susceptibility seemed to be important seizure precipitants, particularly in non-photo-sensitive patients. Twenty-nine per cent of patients had partial (mainly occipital) video game associated seizures. Occipital spikes were common in the EEG of these patients. Photosensitivity to intermittent photic stimulation may have been important in two patients but in the others, who all played arcade video games, other mechanisms need to be considered. Video game associated seizures are a feature of several epileptic syndromes and differ in precipitants and appropriate management."

There exist certain technologies for dramatically faster reading speeds that can exceed 2,000 words per minute[210]. However, because such systems "flicker" information into your head, you might want to work into ultra-fast reading at a measured rate if you have any tendency toward epilepsy in your family.

What *hasn't* been done yet, although it seems to have been at the bottom of the Montauk rumors, is the idea that instead of simply firing off neurons in the cerebral cortex, where they can trigger all kinds of *other* effects (not the least of which is flicker vertigo-induced epilepsy) is the application of a properly multiplexed NIR signal to deliver (literally *download* into your brain) either a specific set of recalls, or less outlandishly, a seriously enhanced *predispositions* to accumulation of information without the hard work.

Can you imagine how cool it would be to wake up tomorrow morning and have a programmed “disposition” to speak 10 flavors of Chinese, while also having a predisposition to land hypersonic aircraft while rolling through advanced calculus equations because you’re bored?

No, we haven’t done the research, but the preliminary evidence is there: NIR has the deep tissue penetration capacity to about 3 cm, and when pulsed, while some of the effects might disappear, imagine what could be triggered at the cellular level; effectively loading baseband into the holographic neurons of the brain.

The trick-shot, I think, will be “baseband mapping.”

What this means, in simplest terms, is that we know the “neuron pumping speed of the brain is discontinuous.” While, for example, that you might be able to pulse NIR into the cerebral cortex with a 4-8 Hz “flash” rate (which could deliver a further 8-16 Hz baseband to the tissue structure). To make it really “sticky,” you might need to deliver a trigeminal nerve stimulus that is phase (or time) delayed to “set” the artificial mental capacity, inclination, or memory, in place.

Then there’s the periodic resynchronization which would need to be accounted for. It becomes a complex baseband mapping process to piggy-back onto the NIR or other delivery waves. Still, no question about it, the scaled-up version of our simplistic *Light Crown Project* here at *Old Man Labs* could be scaled conceptually with a multiplexing layer on top of the PBM/LLLLT pulsed carrier baseband. Light pulsed at Gamma brainwave rates with multiplexed content, anyone?

I don’t suppose you noticed that the patriarch of the Ure clan was Andrew N. Ure who, in the 1700’s, was said by some to be the proto for Mary Shelly’s book “*Frankenstein*” for attempting to zap a dead man back to life with electricity.

This “curiosity” with death, the body, and electricity runs deep in our family; my son the EMT, the family’s involvement in the early Medic One program, and now here we are talking about my lab experiments with pulsed light… history rhymes.

Don’t tell the medical profession: I just picked up still more test equipment.

With our collection of LEDs from Mouser.com and the Rhode & Schwartz wideband RF generator plus a lab-grade 25-watt tunable amp for the 10-600 MHz range (I did mention the SAGE radar frequencies at Montauk, right?) what could possibly go wrong?

The worst thing possible of course! None of this seems to be fiction.

18. Frequency Stacking: Gernon and Philadelphia

[**High-level:** Let's keep rolling and see how far this "electronic thinking templates" approach will move us…]

It may seem a bit odd to present frequency data from Bruce Gernon's flight through "electronic fog" where he encountered a "time anomaly" in the same context as a discussion of the so-called Philadelphia Experiment, but the events have much in common when compared as *spectral phenomena.*

In addition to the Philadelphia *story* and Gernon *experience*, I will offer some related comments on our other cases (Montauk and Hutchison Effect) along the way.

A D.C. Component

Let's compare events from D.C. and move up from there.

Literally, there was D.C. power present in both locations. Bruce Gernon's Beech A36 Bonanza had a standard 12-volt electrical system. There was a modest storage battery and that vintage of Beech had a moderately-sized alternator.

While we cannot reconstruct what power was used aboard either the Eldridge, or our favored suspect ship, the USS Timmerman, it is safe to say that 24 to 32-volt D.C. power was widely available.

In addition, D.C. welding what coming into its own in WW II:

> "In 1940, Ingalls Shipbuilding, Pascagoula, Miss., finished work on the world's first all-welded ship, the SS Exchequer. The steel plates of the cargo vessel's hull were welded end-to-end rather than overlapped and riveted. This technique revolutionized shipbuilding.
>
> All-welded ships required special production methods. "The use of the step-back method of welding is favored by most shipbuilders, others using straight welding or a block system, sometimes varying these with a wandering sequence, all with a view to minimizing shrinkage stresses in the structure," wrote editors in 1943[211].

That source article, by the way, from *Welding Design*'s archives, reveals other aspects of World War II welding you may not have previously appreciated: Like the fact that there is more than 113.6-*miles* (600,000-feet) of welding bead on a Liberty Ship.

To our first observation, though: The presence of a D.C. power bus, whether shipboard or on Bruce Gernon's Beechcraft, means we must look at one experimental "frequency" to be considered is *direct current* near an anomaly.

This brings us a discussion of Fleming's Rule which Wiki's this way[212]:

> "Fleming's left-hand rule for motors is one of a pair of visual mnemonics, the other being Fleming's right-hand rule (for generators). They were originated by John Ambrose Fleming, in the late 19th century, as a simple way of working out the direction of motion in an

> electric motor, or the direction of electric current in an electric generator.
>
> When current flows through a conducting wire, and an external magnetic field is applied across that flow, the conducting wire experiences a force perpendicular both to that field and to the direction of the current flow (i.e. they are mutually perpendicular). A left hand can be held, as shown in the illustration, so as to represent three mutually orthogonal axes on the thumb, fore finger and middle finger. Each finger is then assigned to a quantity (mechanical force, magnetic field and electric current). The right and left hand are used for generators and motors respectively."

This may seem like a "stretch" to look at purported time-travel experiences as having a D.C. component, but it *is* not something we can abruptly dismiss for two reasons.

The first is that any cable carrying direct current sets up a small magnetic current. In doing so, it may be effectively *biasing* the subatomic substrate in a manner that would make it *receptive* to other inputs.

In the case of the limited source Montauk Project, we know (from personal experience on a radar site) that there is some D.C. back-up power for operation like generator-starting and so forth.

And, in the Hutchison experiments, one reason for his reported failure to repeat certain effects, is that an experimenter using war surplus equipment might not realize that a D.C. component *might* figure into the appearance of an "effect." After all, when a piece of equipment might run on a dynamotor, the power leads from a 24-volt D.C. power source might not *seem* pertinent at the time and it could be a "forgotten detail."

Low Frequency Spectrum

Thanks to Gernon sharing information about his electronics package, we can say with some confidence that his automatic direction finder (ADF) was operating at the time of his time-traveling experience. Based on his recall, his aircraft likely had either the Bendix-King T12C or KR85 ADF.

ADF design is somewhat "standard" – most receivers are either single-conversion using a 455 KHz I.F. section or, more commonly, a dual-conversion regimen with a 10.7 MHz first I.F. and following that a 455 KHz I.F. As we noted previously, the ADF designs approved for aircraft use, universally employ an RF amplifier section ahead of the first mixer. Because of this, it is not intuitively apparent how a long-wave radio signal could be involved in the Gernon experience.

There *is* however, a source of low frequency energy in that the aircraft did have a generator. These are problematic, to say the least. In the event of a partial failure, they can put out "ugly electricity." Their other attributes include things like not putting out significant charging power below about 1,800 RPM, or so. That wasn't a problem for Bruce Gernon's flight, as he doesn't mention any power issues. That said, the quirks and performance of generators is while *PlanePower* is in the lightweight high-output alternator business for general aviation aircraft[213].

While a charging system fault is an unlikely source of a low-frequency signal in the 50 KHz and up range, I would be remiss not to mention that some Beechcraft did have an electric (versus hydraulic) propeller *pitch control*.

The pitch control twists the blades to control the "bite" taken out of the sky. When in the take-off mode, the prop is set to "finer" pitch which while producing lower top-end speed, results in a firmer "bite." The way aircraft pitch is measured is to imagine the prop is like a "screw." When you turn the screw one full turn, how many inches forward does the shaft move?

In a typical (specialized) prop, used by bush pilots for short take-off and landing contests, the pitch may be 48-50 inches for a smaller 120-150 HP engine. On the other hand, a full-on cruise prop on the same airplane might be on the order of 60 to 64-inches.

While most light training aircraft (Cessna or Diamond, for example) employ

fixed-pitch props, often set to a compromise 58-inch pitch (which varies by engine and aircraft), upscale Beech products from the Debonair on up (including the A36) employ adjustable pitch propellers. This is one reason the aircraft has great take-off performance as well.

The Beech A36 came equipped with a hydraulically-actuated "constant speed" propeller.

I managed to obtain the Beech Pilot's Operating Handbook because it seems germane to our research in that we are not limiting our consideration to just *electronic* phenomenon. Instead, we must be open to "surprises" such as the one I'm about to share with you:

You will recall that Gernon first spotted the "odd cloud" behind him after he had climbed and initially transitioned to faster flight.

As a pilot, it's easy for me to find the operating handbook for the specific A36 Gernon was flying (Serial number E204) and look up its normal flight profile. Gernon was a well-trained and experienced pilot and, as such, would be flying a "normal profile." When pilots want to "play" they don't do that over the Atlantic Ocean. Somewhere you can "glide to the field" is preferred.

Let's go through some numbers here:

Gernon's plane was flying an 80-inch diameter, three-bladed prop[214]. That coupled plane's IO-520 engine, its 520 cubic inches, and 285-horsepower to the sky. The three-bladed prop is a little quieter (inside the airplane) than the larger 2-bladed prop.

The manufacturer recommends "Normal Take Off" as full power, 2700 RPM and then, clear of obstacles, setting the climb speed as desired.

The Pilot's Operating Handbook also specifies a "Normal Climb" as 2,500 RPM and 25-inches of manifold pressure (pilots call this "25-square") on the engine induction system monitor.

After that, the aircraft could continue at 2,500 RPM (or reduce to 2,400 RPM) but reduce manifold pressure to 23-inches and make very good speed (168 knots/180 MPH) on up cruising altitude, usually 7-10 thousand feet. This would put fuel consumption in the 13-gallons per hour range and 163 knots of cruise speed.

Alternatively, the engine speed could be dropped back a bit, to 2,300 RPM and drop the fuel burn down to 11.9 gallons per hour while dropping down to 152 knots. From this, we expect Gernon had likely just set-up on about 2,400 RPM after the full power climb to 1,000 feet.

My guess is that Gernon would likely have flown around 2,400 RPM which would place him in the 156-158 knot range. That's still moving down the highway, so to speak, but you're not buying an oil company, so much.

Gernon recalls the profile specifics as follows:

> "*We definitely had the 80-inch 3 blade prop. When I spotted the lenticular cloud, we were cruising at 180 mph at 1000 feet and had just arrived on the western shoreline of Andros. We cleared the 1500 feet overcast and transitioned to climb attitude of 1000 feet per minute and 105 mph. I increased rpm to 2500 and manifold pressure to 25 inches and proceeded to climb directly over the bubble cloud.*"

Suddenly, it happened: I had one of those rare "*Ah-hah!*" moments…

19. An Acoustical Aspect Clarifies

[**High-level:** Idea exploration is *not predictable* outside of the usual two-standard deviation bounds. But I'd had not one, but several "out of bounds" experiences early in life that changed how I looked at the world dramatically. It's a key building block to what follows.]

As I continued to "crunch the numbers" of Gernon's run-in, along with the anecdotal reports, such as the Philadelphia Experiment, something came into focus for me that deserves detailed discussion.

Specifically, there seems to be a commonality of an *acoustical component* to most reports of anomalous space-time bending cases.

In addition, there may be another vibratory system being activated.

To consider this with greater acuity, three short stories are in order.

The first involves more experiences both in the literature of "nominal world." The second involves my personal experiences in a recording studio. Lastly, there is "time at the piano."

A Visit from a Monk?

Let's start with my personal research into real-world manifestations of "spiritual power." In my early twenties, I did a lot of study into anomalous events. At the time, I was news director of KMPS AM/FM in Seattle.

The radio station had just moved to 1507 Western Avenue, down below the Pike Place Market. Don Riggs was anchoring the newscasts. That left my schedule open to do many "public affairs" interviews for the station's Sunday community affairs program "*Introspect.*"

The format of the show was multiple 5-to-15-minute segments with all kinds of famous people. Besides great authors like James Michener, Richard Bach, and Ernest K. Gann (both pilots, by the way, so we swapped "hangar stories") lots of other great interviews came along. Like the Dr. Raymond Moody interview mentioned in the first chapter of this book.

On this day, a large high-end RV pulled up in front of the station and double-parked on Western Avenue. Normally, police would be ticketing such an offense immediately. But this time? Cops drove by and were seemingly immune to the presence of what looked like a 45-foot diesel "pusher" bus that in today's money would have been half a million-buck's worth.

A small Asian man, older, but of no particular age, presented himself at the front desk with two assistants. "He is here for his interview" one of them told the receptionist.

After an interview that was totally forgettable, this small fellow said, "We need to go for a walk and talk."

Since the station was just on the market side of the viaduct, the elevated roadway that separates the waterfront from the market district, I agreed. There was something "familiar" about the man, but I couldn't place it.

As we walked, first down the long stairs of "The Hill Climb" and then walking south along the waterfront toward the ferry terminal, the man began to counsel me on spiritual matters. It struck me as odd, but my studies of the occult were always done with the goal of setting *data* more than collecting power or money. He seemed to appreciate that.

He then told me that what I had read about ancient orders in Tibet were true.

And that there really were ascended masters who walk the earth, looking after the balance of reality. I listened intently and followed the general outline of what he was saying.

By the last third of the walk, I was on total overload. But he reassured me that all was well and that all I had to do was to remember "the light chant" and my life would be fine.

"The what???"

With that, he had me repeat it a dozen times so that I would never forget it. Which I haven't:

"*Beloved I Am Presence bright,*

Round me seal your Tube of Light.

From Ascended Master's flame,

Called forth now in God's name.

Let it keep my spirit free,

From all discord sent to me.

I am calling forth violet Fire,

To blaze and transmute all desire.

Keeping on in Freedom's name,

Till I am One with the Violet Flame."

With that, we had arrived at the base of the Hill Climb and as we hiked up the steps I noticed little else about the man. Except he was wear a suit. An exceptionally *expensive* and well-made one.

He got into the bus, which has no signage on it – which put him in a whole different class that most of the marketing-oriented spiritual leaders I had met – and the bus rolled south down Western Avenue.

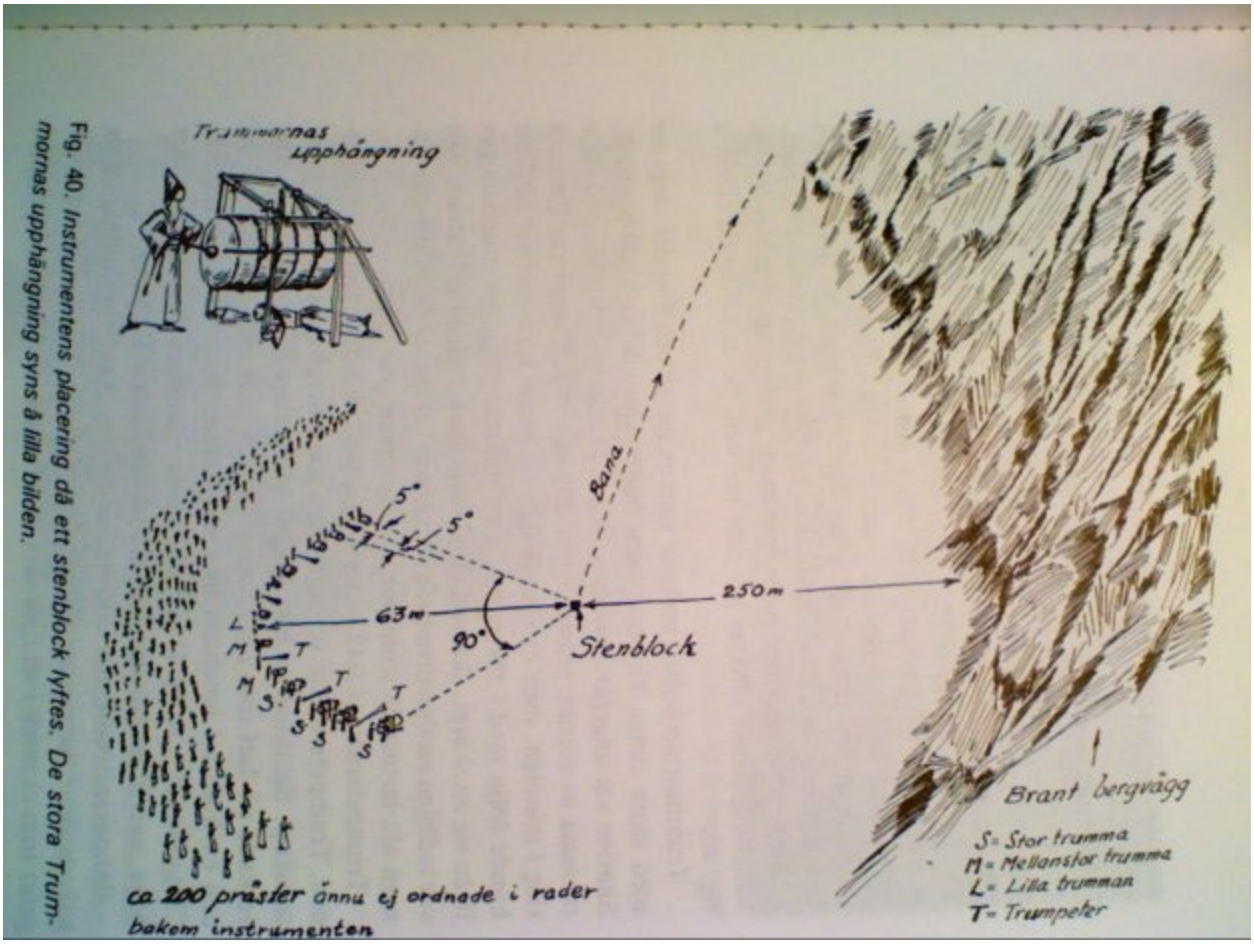
To this day, it has been one of the most singularly odd events in my life, equaled only by as "moment of Grace" experienced a few years later.

Tibetan Levitation

As I started working on this book, however, the story about old monks in Tibet being able to move blocks weighing many tons by simply blowing horns came to mind.

The roots of this story

This tale, from earlier sources, was recounted in David Hatcher Childress book in 1986 (“*Anti-Gravity and the World Grid*[215]) included this remarkable drawing of how the monks were arranged:

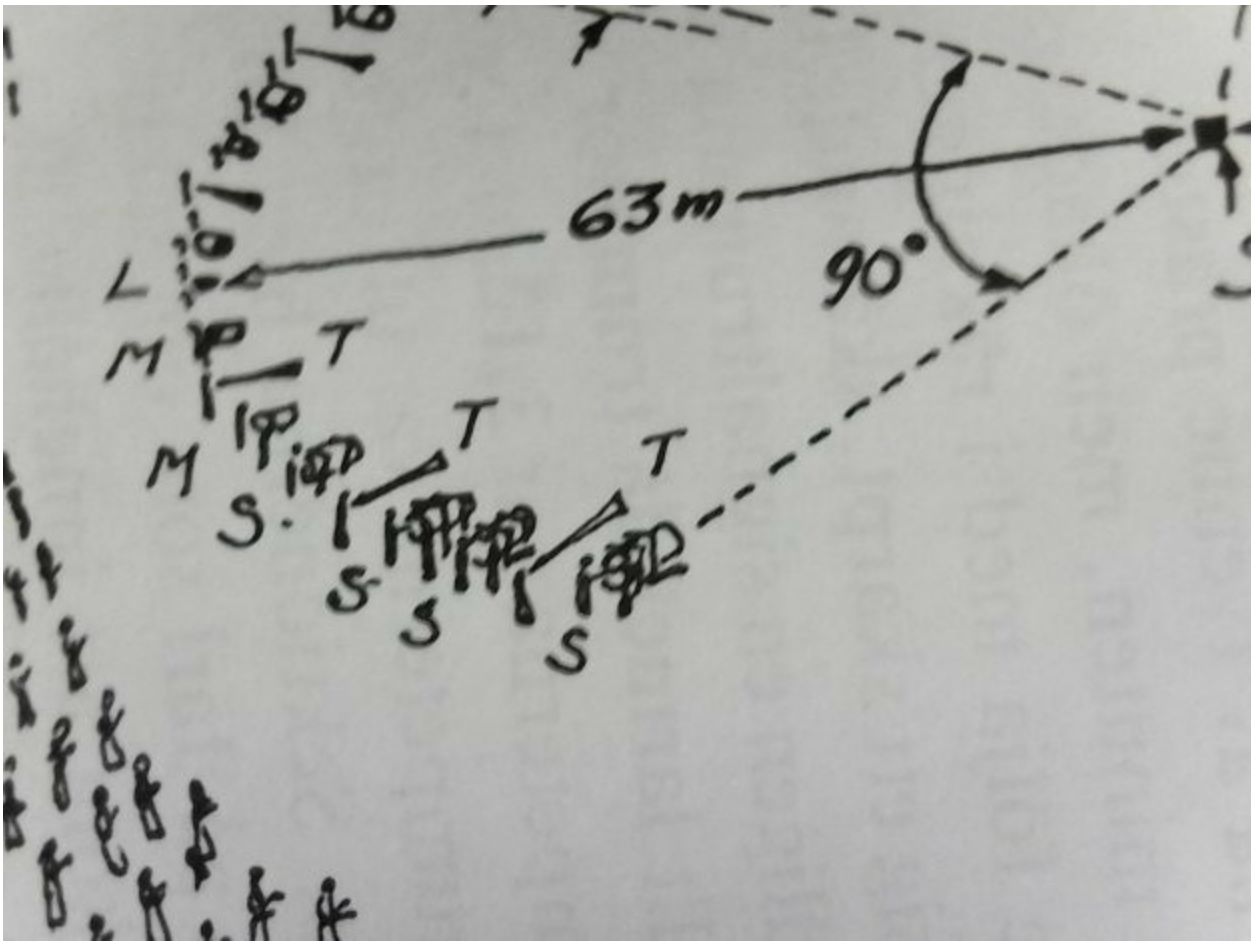


This drawing appears in many other publications, but no one has done a credible job of analyzing the implications of the work reported by Kjellson.

According to one of the multiple accounts on the web,[216] all of which seem to repeat a variation of Kjellson’s Swedish language source material which we acquired for this book’s research[217]:

> “In the middle of the meadow, about 250 meters from the cliff, was a polished slab of rock with a bowl like cavity in the centre. The bowl had a diameter of one meter and a depth of 15 centimeters. A block of stone was maneuvered into this cavity by Yak oxen. The block was one-meter wide and one and one-half meters long. Then 19 musical instruments were set in an arc of 90 degrees at 63 meters from the stone slab. The radius of 63 meters was measured out accurately. The musical instruments consisted of 13 drums and six trumpets. (Ragdons).
>
> Eight drums had a cross-section of one meter, and a length of one and one-half meters. Four drums were medium size with a cross-section of 0.7 meter and a length of one meter. The only small drum had a cross-section of 0.2 meters and a length of 0.3 meters. All the trumpets were the same size. They had a length of 3.12 meters and an opening of 0.3 meters. The big drums and all the trumpets were fixed on mounts which could be adjusted with staffs in the direction of the slab of stone.
>
> The big drums were made of 3mm thick sheet iron, and had a weight of 150 kg. They were built in five sections. All the drums were open at one end, while the other end had a bottom of metal, on which the monks beat with big leather clubs. Behind each instrument was a row of monks.”

Because of this fascinating report, I looked more closely at the arrangement shown by Kjellson:



Translated, the T positions are the “trumpets” (ragdons like dengchens), S positions are large drums, M is the middle-sized drums, and the L is the little drum at the center – the highest-toned drum.

While the casual reader may not (*yet) be seeing the Big Picture here, let me now move on to…

Studios and Standing Waves

In the early 2000's, I was hired to work as the campus director for a recording engineer school in Los Angeles.

The owner of the school had founded Soundmaster Recording Engineer School on Magnolia Boulevard in Burbank. There, lots of famous music was recorded in the 1970's including (according to what I was told) music by the *Mamas and Pappas*, *Joe Cocker*, and other well-known artists.

One of the often-told stories I heard from instructors was how the original school owner, Brian, wanted to show students how audio frequency "standing waves" occurred in a studio at high sound pressure levels (SPLs). So, he lit off an automotive emergency flare over a metal wastebasket.

To illustrate his point further, he turned on an audio signal generator and tuned it across the lower end of the audio spectrum. Momentarily, the choking smoke seemed to "freeze" and standing waves appeared. The experiment ended a few seconds later due to the choking smoke. But no one forgot the experience of standing waves.

Many people have seen standing waves and not realized it. We see kayakers "riding standing waves" created by a down-flowing river running over large boulders on the riverbed. As the water flows, stable waves are created on the surface. The water pushed a kayaker into the wave which they surf. Riding in place. The art of kayaking here is to put the kayak at the highest point of the "standing wave" which results in maximum apparent speed, while remaining stationary.

We find a detailed description of standing waves in this Wikipedia entry:

> "In one dimension, two waves with the same frequency, wavelength and amplitude traveling in opposite directions will interfere and produce a standing wave or stationary wave. For example: a wave traveling to the right along a taut string held stationary at its right end will reflect back in the other direction along the string, and the two waves will superpose to produce a standing wave. The reflected wave has to have the same amplitude and frequency as the incoming wave. The phenomenon can be demonstrated mathematically by deriving the equation for the sum of two oppositely moving waves:

A harmonic wave traveling to the right along the x-axis is described by the equation

$$y_1(x,t) = A\sin(\frac{2\pi x}{\lambda} - \omega t)$$

An identical harmonic wave traveling to the left is described by the equation

$$y_2(x,t) = A\sin(\frac{2\pi x}{\lambda} + \omega t)$$

where:

A is the amplitude of the wave,

ω (called the angular frequency and measured in radians per second) is 2π times the frequency (in hertz)

λ is the wavelength of the wave (in metres) and

x and ***t*** are variables for longitudinal position and time, respectively.

So the equation of the resultant wave y will be the sum of y1 and y2:

$$y(x,t) = y_1 + y_2 = A\sin(\frac{2\pi x}{\lambda} - \omega t) + A\sin(\frac{2\pi x}{\lambda} + \omega t)$$

Using the trigonometric sum-to-product identity

$$\sin a + \sin b = 2\sin\left(\frac{a+b}{2}\right)\cos\left(\frac{a-b}{2}\right)$$

to simplify:

$$y = 2A\sin\left(\frac{2\pi x}{\lambda}\right)\cos(\omega t)$$

This describes a wave that oscillates in time, but has a spatial dependence that is stationary; at any point x the amplitude of the

$$2A\sin\left(\frac{2\pi x}{\lambda}\right)$$

oscillations is constant with value at locations which are even multiples of a quarter wavelength

$$x = \ldots -\frac{3\lambda}{2},\ -\lambda,\ -\frac{\lambda}{2},\ 0,\ \frac{\lambda}{2},\ \lambda,\ \frac{3\lambda}{2},\ \ldots$$

called the nodes, the amplitude is always zero, whereas at locations which are odd multiples of a quarter wavelength

$$x = \ldots -\frac{5\lambda}{4},\ -\frac{3\lambda}{4},\ -\frac{\lambda}{4},\ \frac{\lambda}{4},\ \frac{3\lambda}{4},\ \frac{5\lambda}{4},\ \ldots$$

called the anti-nodes, the amplitude is maximum, with a value of twice the amplitude of the original waves. The distance between two consecutive nodes or anti-nodes is λ/2.

Where is "A?"

The last portion of our data collection occurred almost 60-years years ago. It involved piano lessons and the lower end of the piano keyboard.

Let me back-up: When I was young, my parents decided that I should learn to play the piano. So, attending junior high school at Asa Mercer in Seattle, I would be walking by the home of a well-regarded piano player, Eileen Shimamura.

One thing led to another, and I was not the best student.

Then, one day as I was sitting at the family piano in the living room of our home, I happened to fixate – for some unknown reason on either *lower C* or *lower F* on the keyboard. For some reason, there was *something* about the sound that was captivating. I couldn't put it into words at the time.

It was almost a *slow phasing* sound. You can hear it in a properly sounded didgeridoo. This *phasing* wasn't from a sound column, it was resonances of wood in an upright grand piano.

Later in life, I remember a most peculiar *dream* about flying. It involved that note – the lower C or F or whatever – and in the dream as I stood near the door of my shop, I remember feeling the note deep in my chest.

As I levitated…the note sounded in my *chest*.

Naturally, I passed it off as a "*crazy dream*" and moved on. But in 2017, for reasons I cannot comprehend even now, I was compelled to buy audio and radio frequency generators.

Oh, and one more thing.

As I was working (albeit in management) in a music-related industry (training recording engineers) I took considerable interest in a controversy (some would label it a *conspiracy*) involving the A-440[218] versus A-432 instrument tuning debate.

Still, since we're are tromping around spectral issues, we need to be aware of this debate because it *is* related to our work.

A body of evidence suggests that songs tuned to A432 pitch are more pleasing than setting lower A to 440 Hz (A440 tuning), but I've heard great

songs recorded both ways. So, first the deal on A440[219]:

> A440 or A4 (also known as the Stuttgart pitch), which has a frequency of 440 Hz, is the musical note of A above middle C and serves as a general tuning standard for musical pitch.
>
> The International Organization for Standardization classify it as ISO 16. Prior to the standardization on 440 Hz, other frequencies were standardized upon. Although not universally accepted, it serves as the audio frequency reference for the calibration of acoustic equipment and the tuning of pianos, violins, and other musical instruments."

The other tuning, setting A to 432 Hz comes from Pythagorean tuning and is arguably more "common sensical:"

> "Pythagorean tuning is based on a stack of intervals called perfect fifths, each tuned in the ratio 3:2, the next simplest ratio after 2:1. Starting from D for example (D-based tuning), six other notes are produced by moving six times a ratio 3:2 up, and the remaining ones by moving the same ratio down.
>
> For instance, the A is tuned such that its frequency equals 3:2 times the frequency of D—if D is tuned to a frequency of 288 Hz, then A is tuned to 432 Hz. Similarly, the E above A is tuned such that its frequency equals 3:2 times the frequency of A, or 9:4 times the frequency of D—with A at 432 Hz, this puts E at 648 Hz. Since this E is outside the above-mentioned basic octave (i.e. its frequency is more than twice the frequency of the base note D), it is usual to halve its frequency to move it within the basic octave. Therefore, E is tuned to 324 Hz, a 9:8 (= one epogdoon) above D. The B at 3:2 above that E is tuned to the ratio 27:16 and so on. Starting from the same point working the other way, G is tuned as 3:2 below D, which means that it is assigned a frequency equal to 2:3 times the frequency of D—with D at 288 Hz, this puts G at 192 Hz. This frequency is then doubled (to 384 Hz) to bring it into the basic octave."

Musicologists seem to have fallen in love with *whole numbers* but around here (at *Old Man Labs*) we are very comfortable getting the 9:8 interval epogdoon down to as many decimal places as you're care. Such is the

difference between a signal generator and musical sensibilities.

Not that the tuning issue of A432 or A440 would make a pile of beans worth of difference, but we strongly agree with the results reported in a well-regarded audio engineering blog by University of Salford (Manchester) professor Trevor Cox: “Pitch shifting to 432 Hz doesn’t improve music: A scientific test of 440 Hz vs 432 Hz.”[220]

But, as we shall see, tuning *does* matter and oh, yeah, that personal banging the parent’s piano? It was close…

A Third Class of Waves

Although it is tempting to consider radio waves at the speed of light, along with acoustical waves moving around 1,127 feet per second (depending on temperature or density altitude) and end the investigation there, I'm afraid we can't.

That's because what it likely at work is a *third* type of wave transmission.

In other words, there *is* a kind of wave in-between that moves differently.

We must "sneak up on the idea" though because it's not terribly clear unless you know what you are looking for.

Let's start with the Wikipedia discussion of "Rayl" numbers[221] which are related to *acoustical impedance* (resistance, which can be thought of as *sound transmissibility*).

> "A Rayl, rayl or Rayleigh is one of two units of specific acoustic impedance or, equivalently, characteristic acoustic impedance; one an MKS unit, and the other a CGS unit. The units are named after John William Strutt, 3rd Baron Rayleigh, and not to be confused with the *rayleigh unit* of photon flux, used to measure airglow, and named after his son, Robert John Strutt, 4th Baron Rayleigh. It has the same dimensions as momentum per volume."

Since we know that the flight of Bruce Gernon was in a predominantly *aluminum-skinned* aircraft, we began considering the *acoustic impedance* of aluminum.

Since you might has missed the discussion of grain-oriented glass-ceramics for piezoelectric transducers in *Key Physics Papers* (2007)[222] you might have missed the idea of the "other waves" arising as a function of acoustic impedance.

Which is[223]?

> "Acoustic impedance and specific acoustic impedance are measures of the opposition that a system presents to the acoustic flow resulting of an acoustic pressure applied to the system. The SI unit of acoustic impedance is the newton second per cubic metre (N·s/m3) or the rayl

per square metre (rayl/m2), while that of specific acoustic impedance is the pascal second per metre (Pa·s/m) or the rayl. In this article the symbol rayl denotes the MKS rayl. There is a close analogy with electrical impedance, which measures the opposition that a system presents to the electrical flow resulting of an electrical voltage applied to the system."

Here's the key point – and it sets us on the path, I believe, to solving a *lot* of mysteries out there, not just the Bruce Gernon flight or the arising of foo fighters in World War II fighter-bomber missions:

Air has one speed of wave transmission. The electromagnetic spectrum has another.

But we also now find three very useful data points:

Material	**Acoustical Speed**	**Rayl Number**
Aluminum	6,300 m/S (20,669.29 f/S)	17 (varying some by alloy)
Quartz	5,800 m/S (19,028.87 f/S)	15.2
Gold	3,240 m/S (10,629.42 f/S)	64
Water	1,480 m/S (4,855.54 f/S)	1.5

Description of the New Effect

We already know that under correct conditions, electricity can be made to discharge in as corona type effect.

But we also know that the main forces present in our most credible reports were those of Gernon and the WW II fighter-bomber crews with their foo fighter reports. In neither case, was there much evidence of high enough static levels to cause discharges.

However, what the data is suggesting is that a combination of electrical effects (such as static build-up from airflow along an airfoil boundary layer[224]) *might be influenced by acoustic effects at specific frequencies.*

Or, do we need *electricity* to be present, at all?

20. Engineering Levitation and Time Fields

[**High-level:** Reports from Tibet and recordings of sound begin to suggest that a new class of *acoustically-pumped cold plasma* may exist underlying previously reported events.]

A most unbelievable thing happened when I went looking for data suggesting ways to "duplicate Dr. Jarl," and "duplicate Kjellson." There wasn't any.

I would have expected, given all the money that has gone into NASA and government programs in general, that *someone* along the way, would have conducted a massive study of *interacting field effects*.

Nope. Hasn't happened.

What we can sense, although it stands to be "proven" scientifically, is that arranged in a certain way, acoustical sources could be used to levitate large objects and manipulate the local flow of time.

I told you early-on about my father's time as a deacon in our church. How Texaco engineers using the Bible to find natural gas seeps in the mid 1950's.

Now it's my turn to get Biblical with another even more amazing story from antiquity, if you're still skeptical. The Wikipedia summary will do fine[225]:

> "The story of Jericho is told in Joshua 6:1-27.
>
> The first five books of the Hebrew Bible tell how Noah cursed Canaan to become a slave, and how God gave the land of the Canaanites to Abraham and his descendants. The children of Israel (descendants of Abraham) themselves became slaves in Egypt, but through Moses God brought them out of Egypt and to the borders of the promised land of Canaan. There Moses instructed them to seize the land by conquest, and placed them under the command of Joshua.
>
> Joshua sent spies to Jericho, the first city of Canaan to be taken, and discovered that the land was in fear of Israel and their God. The Israelites marched around the walls once every day for seven days with the priests and the Ark of the Covenant. On the seventh day they marched seven times around the walls, then the priests blew their ram's

> horns, the Israelites raised a great shout, and the walls of the city fell. Following God's law of herem, the Israelites took no slaves or plunder but slaughtered every man, woman and child in Jericho, sparing only Rahab, a Canaanite prostitute who had sheltered the spies, and her family."

What we don't have, with any high degree of specificity, is the description of the horns that were used for devastating effect. The New International Version of the Bible describes seven, not six horns, whereas the Tibetans used six:

> "Then the Lord said to Joshua, "See, I have delivered Jericho into your hands, along with its king and its fighting men. 3 March around the city once with all the armed men. Do this for six days. 4 Have seven priests carry trumpets of rams' horns in front of the ark. On the seventh day, march around the city seven times, with the priests blowing the trumpets. 5 When you hear them sound a long blast on the trumpets, have the whole army give a loud shout; then the wall of the city will collapse and the army will go up, everyone straight in.[226]"

This all comes to bear when we read about the trumpet frequencies purportedly used by the Tibetan monks: "*All the trumpets were the same size. They had a length of 3.12 meters and an opening of 0.3 meters*.[227]"

So, what was the frequency of the Biblical horns at Jericho? A sampling of multiple Bible versions gives us some ideas:

> "4 And on the seventh day the priests shall take the seven trumpets, which are used in the jubilee, and shall go before the Ark of the Covenant: and you shall go about the city seven times, and the priests shall sound the trumpets.[228]
>
> Then Joshua the son of Nun called the Priests and said unto them, Take up the Ark of the Covenant, and let seven Priests bear seven trumpets of rams' horns before the Ark of the Lord.[229]

Last, but not least, is the version in Young's Literal Translation[230]:

> (And Jericho shutteth itself up, and is shut up, because of the presence of the sons of Israel -- none going out, and none coming in;)
>
> 2 And Jehovah saith unto Joshua, `See, I have given into thy hand Jericho and its king -- mighty

ones of valour,

3 and ye have compassed the city -- all the men of battle -- going round the city once; thus thou dost six days;

4 and seven priests do bear seven trumpets of the jubilee before the ark, and on the seventh day ye compass the city seven times, and the priests blow with the trumpets,

5 and it hath been, in the prolongation of the horn of the jubilee, in your hearing the voice of the trumpet, all the people shout -- a great shout, and the wall of the city hath fallen under it, and the people have gone up, each over-against him.'

6 And Joshua son of Nun calleth unto the priests, and saith unto them, `Bear ye the Ark of the Covenant, and seven priests do bear seven trumpets of the jubilee before the ark of Jehovah"

[One research note to self: Several descriptions of the Ark of the Covenant seem to make it clear that the Ark is an *instrument of communications*[231] and not the Indy Jones-style container of death and pestilence. This is likely a fertile area for future research.]

Thinking like an Acoustical Engineer

Time to have a cup of coffee, push back from the data gathering, and just *look* (as a dime novel detective would) at the *evidence* that's been piling up.

What appears to me are many similarities between many of our data point collections. Let me run through the major ones which seem to hold the highest promise of a breakthrough:

1. I am struck by the high-quality measurements in the Kjellson/ Jarl account. The distance from a passive acoustical reflector (the mountainside) was given as 250 meters. With more precision, the stone to be levitated was 63-meters from the arc which describes the 90-degree circle made by the trumpets and drums. From this it is apparent that a phase relationship can be inferred. Since four times 63 meters is 252 meters, we can assume that a quarter wavelength standing wave is involved in the lifting process. The two-meter error on the longer measurement may have been from a lost count or topographical aspects. If the acoustical focal point was elevated, for example, and the mountain not precisely vertical, then the initial reflection might have been from 250 meters, with the end-point reflection at 255 meters, with 252 meters representing the center of the passive reflector.
2. Kjellson/Jarl make no comments on prevailing atmospherics, though. It would be instructive to know whether the weather was particularly dry, cool, and humidity levels, though.
3. We know on the day of Bruce Gernon's flight and encounter with a "time warp" that the high temp at West Palm Beach, Florida was 78°F for a high and 60°F as a low. Average humidity was 67%, so not a wintery cold-front with super dry air[232].
4. There is one meteorological quirk: The dew point dropped quickly from 10 65°F down to a mere 34°F but then strangely, right back up to 62°F by 1 PM – that's a damn big swing.
5. This short, sharp drop in dew point, no doubt due to cold dry air, is also visible in the dewpoint data for Miami, Florida, where it began at noon on December 1, 1970[233], and then returned to "normal" about 5 PM. So, there is at least some basis to expect that it is static-building element. Acoustically-pumped static charging?

6. We know, that like the horns blown by Tibetan monks used a mountain face as a concave passive acoustic reflector, and by people wanting to take Jericho, where the city walls acted as the passive reflectors, that Bruce Gernon's Beech A36 was generating a large, 125 Hz primary sound (engine rotation speed). (2,500 RPM = 125 RPS).
7. In addition, there was also a 375 Hz higher-frequency component which was due to the 3-bladed propeller. Damn close to *Shofar* frequency of 375 Hz[234] This seems like a logical place to begin our work.
8. We would note that the *Ark of the Covenant* was used in very dry regions so again, we're drawn to the "dry air presence" issue.
9. The SHOCKER to me was when I did the math on Tibet: 63 meters plus 252 meters. Sound familiar? It should.

Reread this part of Bruce Gernon's email to me: "*When I spotted the lenticular cloud we were cruising at 180 mph at 1000 feet and had just arrived on the western shoreline of Andros*.[235]"

The presence of a lenticular cloud means, by definition, a very peculiar wind formation[236]:

> "As air flows along the surface of the Earth, it encounters obstructions. These can be human-made objects, such as buildings and bridges, or natural features, like hills, valleys, and mountains. All of them disrupt the flow of air into eddies. The strength of the eddies depends on the size of the object and the speed of the wind. It results in turbulence classified as 'mechanical' because it is formed through the "mechanical disruption of the ambient wind flow". Where stable moist air flows over a mountain or a range of mountains, a series of large-scale standing waves may form on the downwind side. If the temperature at the crest of the wave drops to the dew point, moisture in the air may condense to form lenticular clouds. As the moist air moves back down into the trough of the wave, the cloud may evaporate back into vapor. Under certain conditions, long strings of lenticular clouds can form near the crest of each successive wave, creating a formation known as a "wave cloud." The wave systems cause large vertical air movement, enough that water vapor may condense to produce precipitation."

By now, it should become apparent why I explained the phenomenon of "standing waves" in such detail. The low-level lenticular cloud reported by Gernon was likely formed by low-level winds, disrupted over the Andros Island landmass, congealing on the leeward side of the Island in advance of the northerly.

We can now say, based on the evidence in hand, that Bruce Gernon's experience with "*The Fog*" west of Andros Island likely arose because of unusual meteorological conditions that day.

Moreover, although his flight may have effectively replayed many aspects of the Tibetan lifting reports and the take-down of Jericho, it varied in an important way, too.

The A36 was using onboard electronics, there was a low-level magnetic field, and there were several radio-frequency sources both on the aircraft and on the ground. On the aircraft we had a not-particularly-suspect ADF (automatic direction finder) as well as a VHF radio. Gernon was also being "pinged" by Miami approach on long-distance radar. We have no way of knowing whether the frequency-agile radar at AUTEC was lined up on him, or not.

At any rate, we expect that during Gernon's encounter, that the FAA Miami radar and the AUTEC acquisition radar would have been producing returns.

21. Designing the Experiments

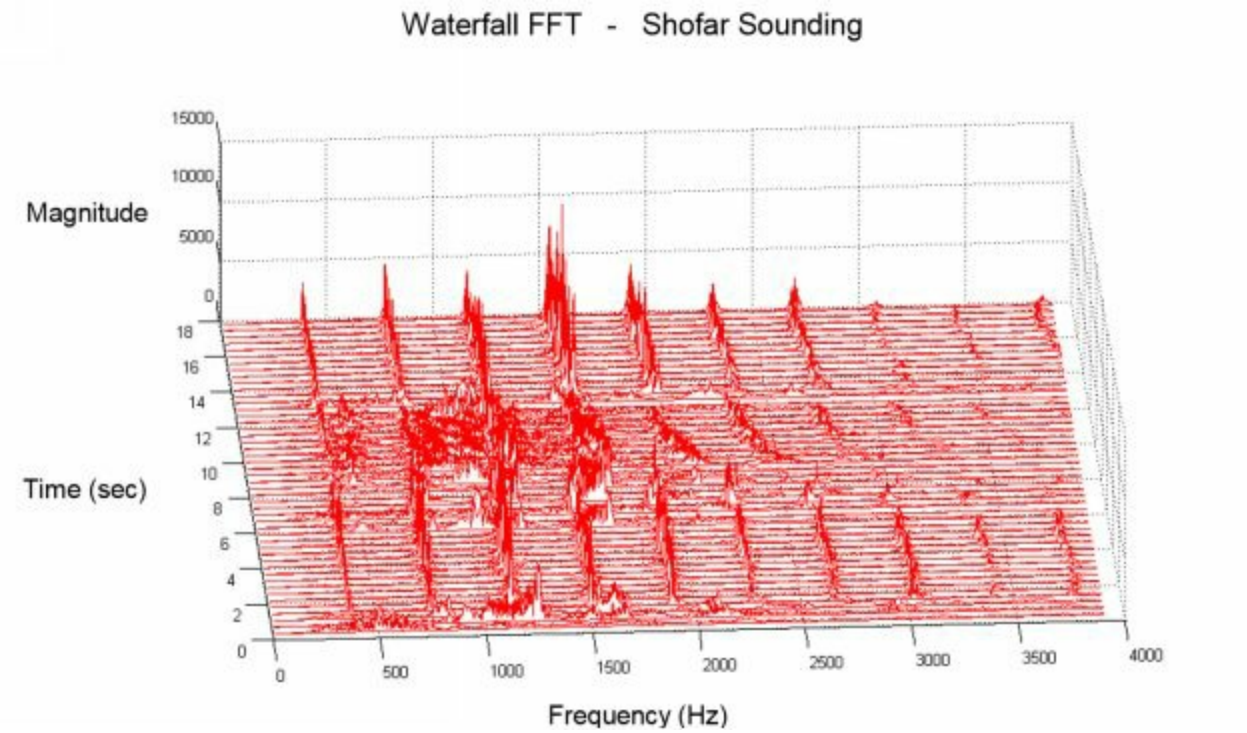
[**High-level:** While we have not documentation of sound propagation in the immediate airspace surrounding a *lenticular cloud*, we can still design a series of experiments that might be able to creation and isolate an acoustically-pumped cold plasma.]

Experimental design is something everyone loves to do. But, as you will read, setting up uncontained levitation will be elusive. For that matter, so is time travel (if we get there). Out of the question, you say?

We can divide up the experiment designs into many sub-tasks.

The first is collecting all the pertinent frequencies. We have been able to do that for the radars, the electronics of Bruce Gernon's aircraft, and we have plenty of lab gear to come up with multiple sources at required spacings in a reasonable test setting.

One that had me stumped, however, was where does one from the frequency (*and spectral profile) of a *shofar* (ram's horn) used at Jericho? Again, luck was on my side as I found a website called "Vibration Data" where exactly what I needed appeared in their January 2007 newsletter![237]



To put this into engineering terms, the IO-520 engine is surprisingly close to a *shofar* spectrally.

As the *Vibration Data* newsletter put it "*The fundamental frequency is 376 Hz, which is slightly higher than an F# note. Integer harmonics are also present. The higher harmonics of the Teruah staccato notes sweep downward in frequency, as shown from about 9 to 13 seconds. There is no standard length for a shofar horn. Thus, individual horns vary in terms of pitch*[238]."

Significantly to this study, there is a strong bulge at 1,200 Hz and this would be about half of the RPM of the Gernon engine profile reported.

There is one additional aspect of the Gernon A36 flight that comes to bear: Specifically there is significant low-altitude Doppler-shift that occurs (high to low) as a high-speed aircraft approaches, then passes overhead.

This makes the design of precise experiments time-consuming because we will have to repeat lots of frequency settings before conclusions may be reached.

The next problem is ascertaining the frequency likely used by the trumpets blown by the Tibetans. One description of the Ragdon Trumpet describes it

this way [239]:

> "The ragdon trumpet produces a very low frequency sound, one I would describe as somewhat "farty." It's similar in frequency to a tuba, but more piercing, and with less "umpah." With a length of 3.12m and an opening of 0.3m, the length/width ratio is about 10.4. If I was sticking with the powers of 2 and 3, that would be close to 34/23 = 81/8 ≈ 10.125."

Since the primary frequency of a tuba is known (43.65 - 349.23 Hz) we only need a few more calculations to begin to design some experiments.

First, we need calculate the frequency of the large drum: 50.44 Hz. Drum in the middle.

Then the middle-sized drums: 75.22 Hz.

And for the smallest drums, we get 252.2 Hz.

For many reasons, these are only starting points for our experiments.

Higher Frequency Prospects

We will now depart from our data-supported research and begin to ask some difficult questions.

Let's begin with the Tibetan levitation report:

Were there any anomalous time events noted? Unlike the Gernon flight, where the high-sound level (SPL) noise from the aircraft was a *single source*, we note that the reported Tibetan levitations involved a total of six trumpets. There were also 13 drums involved.

It stands to reason that the Gernon flight would not have noticed any change in aircraft performance because the closest part of the aircraft was on the order of 63-meters above the area where the anomaly would occur in the temporal domain.

The next levitation report issue is the purpose of the 13-drums.

One of the inferences from the Biblical account that Jericho is that since there is no coherence left in the building materials after the "sonic attack" on the 7th day, is it possible that the Tibetans knew that there needed to be a beat for

some undisclosed reason?

As far as I know, this was not covered in the published work on Kjellson *et al*, but it's a non-trivial issue to someone about to fire off experiments. One possibility is that the drums are used as a "cohering" mechanism. If the very fiber of space-time (and the effects that bind material at an atomic level) are disrupted, does as periodic "timing mark" remind matter to remain coherence and simply levitate?

Oh, since the sound would need to be continuous, would the drums indicate breathing patterns and code changes of musicians? We can't be sure. But, modern signal generation can avoid certain problems, no doubt.

Another grand question is whether the effect is frequency-specific or whether it can be done on higher frequencies than the Tibetans used?

Obviously, we will be conducting our initial experiments on a low-level, shoestring budget (*Old Man Labs* ain't Lockheed Skunkworks). This means we will attempt to use the least-complicated means to achieve results. Initially, we'll be starting with a single small drum in the center of the audio driver array. The initial trio of drivers will be set around where the locations suggested by Kjellson indicate.

However, I'm less than keen on setting up a low-frequency array since one of the key elements seems to be a dislocated 1-wavelength reflector. While it might work using an active array (with audio phase reversal wiring for testing) an effect in the 350 Hz region would likely fit nicely "on the workbench." See the Appendix 4 for a frequency and physical wavelength table.

Remember that the effect we're chasing at this juncture is *only* the levitation effect. The time-travel component would likely involve a similar breaking-down of matter into a dissociated state, using pulsed beats (smaller drums) for steering perhaps, and then applying orthogonal vectors of energy from a combination of radio frequency as well as light sources in the NIR to far UV range, with mixes in the 450-600 nm range to ensure that we haven't overlooked something in the green portion of spectrum.

Road Noise/Time-Travel Stories

George Noory had a fascinating guest on his show *Coast to Coast AM*, several years ago. It was a caller who reported than after speeding on the Interstate (5) in southern Oregon (not far from Grants Pass, OR) the reader slowed to get off the freeway and found themselves in a strange land.

There are other aspects of this phenomenon, too: In one of Rob MacGregor's books (the one co-written with his wife Trish)[240]) a similar tale is told: Someone is on the road one minute and the next? They are suddenly coming to their intended destination from a whole *other direction*. In variants, they are in a different place, entirely.

Because of how my brain works, and because I have been over the section of Interstate-5 in Oregon several times, I can tell you with some certainty that the roadway is made of concrete pavement. And because of *expansion joints* in pavement, we suddenly get some insight into the critical frequencies that are likely involved.

The U.S. Department of Transportation lays out the specification for paving expansion joints as follows[241]:

> "2) For plain concrete slabs, a maximum joint spacing of 15 feet is recommended. Longer slabs frequently develop transverse cracks. It is recognized that in certain areas, joint spacings greater than 15 feet have performed satisfactorily. The importance of taking local experience into account when selecting joint spacing (and designing pavements in general) cannot be overstated. Studies have shown that pavement thickness, base stiffness, and climate also affect the maximum anticipated joint spacing beyond which transverse cracking can be expected. Research indicates that there is a general relationship between the ratio of slab length (L) to the radius of relative stiffness () and the amount of transverse cracking [2]. This research shows that there is an increase in transverse cracking when the ratio L/ exceeds 5. 0. Further discussion is provided in Attachment 1.
>
> (3) For reinforced concrete slabs, a maximum joint spacing of 30 feet is recommended. Longer slab lengths have a greater tendency to develop working mid-panel cracks caused by the rupture of the steel

reinforcement. Studies have also shown that, as the joint spacing increases above 30 feet, the rate of faulting increases and joint sealant performance decreases [4].

(4) Random joint spacings have been successfully used in plain undoweled pavements to minimize resonant vehicle responses. When using random joint spacings, the longest slab should be no greater than 15 feet, to reduce the potential for transverse cracking. Some States are successfully using a spacing of 12'-15'-13'-14'. Large differences in slab lengths should be avoided.

(5) While they do not affect joint spacing, skewed joints have been used in plain pavements to provide a smoother ride. A skew of 2 feet in 12 feet is recommended, with the skew placed so that the inside wheel crosses the joint ahead of the outside wheel. Only one-wheel crosses the joint at a time, which minimizes vehicle response and decreases stresses within the slab. Skewed joints are most commonly used when load transfer devices are not present. While skewed joints may be used in conjunction with load transfer devices, studies have not substantiated that skewing doweled joints improves pavement performance and are not recommended. Dowels in skewed joints must be placed parallel to the roadway and not perpendicular to the joints."

The bottom line here?

Well, we have one more question: Is I-5 made of reinforced concrete with expansion joints? For now, the answer is "Yes!" However, we expect that off in a back room somewhere, a government agency that understands how *Dimensions Next Door* work that the "expansion joint problem" might have revealed the frequencies and pulse relationship.

And to me, it would explain the full court press to install "Continuously Reinforced Concrete Paving" or what the Department of transportation calls *CRCP* and touts its benefits[242]:

"1. CRCP has no active transverse contraction joints, except at ends.

2. Continuous longitudinal reinforcement is provided that results in tight cracks in the concrete at about 2-ft to 8-ft (0.6 m to 2.4 m) spacing. Sufficient reinforcement is necessary to keep the cracks tight.

3. CRCP can extend, joint free, for many miles with breaks provided only at structures, such as bridges."

It troubled me greatly on a trip a few years back to see perfectly good concrete -with expansion joints – being replaced with the "new stuff."

Again, based on the reports of people who have experienced the effects (other than Gernon and documented cases, like Kjellson's notes from Tibet), we can only do preliminary ranging estimates of the "beats per minute" or what we call BPM's in the recording studio. This is made easier because in each of the reported cases, the persons involved were *likely* speeding.

On a freeway, as in southern Oregon, mostly posted 70 MPH (with some sections of 55) we can easily imagine the speeding person doing 10 MPH faster than the posted speed limit. 10-over is what most people do; a cross between quicker and not excessively painful to write a check for when caught!

On a discussion website, one Mazda driver reported[243]:

Model Year: 2008

Transmission: 5 speed automatic

Tire Size: stock (205/50R17)

(± 50rpm)

75mph = 2800rpm

70mph = 2600rpm

60mph = 2200rpm

Again, we can see how at about 68 MPH, this car would likely be very close to the 2,500 RPM Bruce Gernon reported. If on a 55 MPH posted section? That'd be about expected.

No, driving 68 MPH in your old jalopy will not get you into Hilbert Space. BUT if the tires were filled *just right* so that the *drum beat* was correct based on the expansion joint spacing? Perhaps. Six-cylinder engine – like Gernon's? Odds may improve…

What's the Beat?

Assuming 25-foot expansion spacing and 68 miles per hour, we begin the preliminary ranging process:

68 MPH is 359,040 *feet per hour*.

Which reduces to 5,984 feet per minute.

And this makes the "beat" 239.36 BPM. Divide by 60 to convert to seconds: 3.98 Hz. However, that is a totally *unrealistic* drumming speed to maintain. So…

Cut the job between four sets of drums and now what do we have? 79.78 or rounded: 80 beats per minute. A bit over 1 Hz. The larger drums (the mid-sizes) might have been used as the "timing marks for the 8 small drums.

Remember that when beginning a "heavy lift" session, there is no gapping allowed. Drop a note means drop the rock. So, each piece of the lifting "music" had to be tonally dead-to-nuts on and without interruption. There would be no "studio musicians" showing off by playing "either side of the groove."

With everyone would be blowing for all they're worth, and with a line of backup drummers, respectable Sound Pressure Level (SPL's) out 63.5 meters at their acoustical focal point, was possible. Ditto for the ragdon (trumpet) players. Each monk would have to be acutely tuned-in to a drum beat for timing cues. Was the big center drum used for breathing and player changes on the three large horns on each side? Or we the middle-sized drums used?

When we get to the "practical experiments" section of our discussion, we may only need one powerful driver horn per side PLUS one or two pulses at frequencies to be determined experimentally.

The problem with concrete highways is their different expansion joint-spacings make for ugly research…

Problematic Frequency Tables

There may be a path to "bracket" some of the frequencies. For example, we can estimate a 100 RPM range on the IO-520 on Bruce Gernon's plane. Although he set 2,500 RPM, my own (Beech) tachometer could be off more than 50 RPM when a laser propeller tachometer was used. Even that varied by temperature. Propeller tach's tend to be mechanically coupled, and virtually all of them were "old-school" in 1970-era aircraft. Only recently have "glass panels" appeared. (As a pilot, I have to say it:" Long *live "steam gauges!*")

Already, the data is beginning to stack up as a significant statistical problem!

On the road surface, the expansion joint spacing is from 13 to 30 feet. While 239.36 BPM (2.69 to 6.37Hz, Appendix 4) looks reasonable, there is also a "pulse width" (duration) issue we have not addressed. This may be described mathematically because remember, each expansion joint is hit *twice*. Once by the front tires and again by the rear. Whatever we do with the low-frequency component here, it's going to cover a wide range.

Does the effect have anything to do with pulse width? Of course! Just as a skilled drummer can change-up a drum note with a hit off a drum's "sweet spot", we still have before us the "drum beat" pulse width problem.

On a 16-foot wheelbase car? 60 miles per hour? "Ladies and Gentlemen: Start Your Calculators!"

Now, hit eBay looking for used test gear and hope I didn't get there first. It's a nontrivial problem.

With some suspect primary frequencies, it's only a good start. Remember, in the Kjellson drawings, we had *four* distinct frequencies: three of which were pulses (drums) and one of which was a constant (we *think*) signal. Using the shofar as a guide, we might assume higher harmonics are involved: second, or third harmonic energy is very strong. Again, lots of ground to cover.

I've saved the worst for last.

While I was conducting some experimental work, an effect was noted (a computer that has been 100 percent reliable locked up for an unknown reason. My wife, Elaine, came over to my office a couple of minutes later to

inquire what I was doing. When I told her, she admitted that it was an oddly timed event.

Was it my dialing around and hitting different spectral conditions; a dissonance perhaps? How long was it maintained for the odd timing effect to begin?

I had been running a pair of test frequencies (one of the expansion joint pulse frequencies) as well as one-sixth of the airplane engine RPM at the time of the *possible* effect.

As is shown in Appendix 4, the frequencies (and pulse durations) are "all over the map." Consider this: In the case of an expansion joint being struck by a car tire, even the air pressure in the tire, its diameter, and that's before acoustic damping of modern "tuned suspension."

We could discuss these oddities but let's cut to the chase: Gernon's Beech has been "spun up" into the 2,500 RPM range for 5-7 minutes prior to the effect. Acoustically, it was very damn quick.

But in other cases, where a driver finds themselves coming to their destination from the *opposite direction they should be coming from*, then we have a case from a "slow ramp" into the effect. Half an hour – sometimes more.

Note that in the Kjellson case, there were somewhere between 8-12 monks behind *each* of the sound sources. So, we could conclude, a long-duration is required to for the effect to "spin up." It may turn out that initial results could take 30-minutes. This looks like actual work, suddenly.

When we test perhaps 300-500 "tire thump" frequencies – each of these being blips in a noise environment where tire treads and possible pavement grooves are frequencies - we begin to appreciate the problem.

Now toss in two or three more frequencies and suddenly the evasive solution becomes 300 times 300 times 300 trials. 27-million chances to "get it right." At 30-minutes per frequency? 6,450 man-years of effort on a 40-hour basis.

Which is why we don't hear about this kind of phenomenon daily.

For each *single* report that has made it to the literature, there may be 5-1,000

cases that are unreported. "*Jeez, did I have that much to drink last night?*" might account for a few. "*No one's going to believe me…*" In short, there is a social bias against reporting unaccepted and incongruous events. That we have the reports we do is a testament to their importance but also their rarity.

Our data collection process has given us plenty of starting points. But at some point, all the theories must be reduced to practicum. So off to the lab we go.

Time to "Auuummmmmm" and get it… Still, the auto anomalies seemed to be on concrete roads, dry conditions, and we have no hard data except they were in less humid parts of the country.

22. Spectral Engineering of the Experiments

[**High-level:** Here's our equipment list compiled in order to conduct experiments into the acoustically-pumped cold plasma concept."]

Our test bed for amateur "detecting" of phenomenon is not something the average reader is likely will have immediately at hand. The equipment manifest for our October 2017 experiments is as follows:

Audio Amplifiers:

JBL 100 W analog. 2 Channel Power Amplifier

Alesis RA100 analog 2 Channel Reference Amplifier

Rockville RPA4, 500w RMS 2 Channel Power Amplifier

Speakers:

Six matched Bose-Interaudio SA-200 speakers (same drivers as the Bose-301's)

Two Sony bookshelf speakers

Two Polk Audio PSW10 10-Inch Powered Subwoofers

Signal Sources:

BK Precision 4040A Sweep/function generator (0.1 - Hz 20 MHz)

FeelTech dual channel DDS Sweep/function generator (0.1 Hz - 20 MHz)

KKmoon 40MHz Function Signal Generator Dual-channel DDS Arbitrary Waveform Pulse Signal Generator 1Hz-100MHz Frequency Meter

Madell EM1644 digital function generator (0.2 Hz - 2 MHz)

Global Specialties Pulse Signal Generator 4010 (2)

Rhode & Schwartz SYM01 RF (9 KHz – 1,050 MHz)

RF Communications 815 RF Amplifier 10MHZ -500 MHz @10 W out

WaveTek 801 Pulse generator/trigger/gate

HF transceivers (see monitor section)

Assorted UV lights (with power supplies)

High-power NIR light in 1000 nm range

Detection and Signal Monitors:

Accuteck Digital Scale

BAFX Products® - Decibel Meter 30dBA ~ 130dBA +/- 1.5 dB

Kenwood CS-5130 Dual-channel oscilloscope (40 MHz)

Kenwood TS-430, HF radio transceiver

Fluke 115 DMM

18-MHz crystal oscillator (with 9V battery & 6” antenna)

Small 8” plasma ball

Additional equipment, SDR receivers (and computers), HF linear amplifiers, large antennas, and a very good ground system, and such, are available but unlike to be used in the initial test plan.

Software:

Reason® *Essentials* (drum loop creation/source)

Magix *Samplitude Pro X2*

Test Masses:

Assorted clay bricks, concrete block, wood blocks up to 100 LB

23. Concurrent Coral Castle Experiments

[**High-level:** Is it possible that other megalithic builders, besides Tibetan monks, have figured out how to use *sound* to levitate massive stones? Could speculation about locations like the *Coral Castle* be way off-base? Might it have been acoustic rather than magnetically or electrically driven?]

In addition to the experiments described in the acoustical approach, several other arrangements will be tested including signals in the low HF to UHF range.

One such experiment sequence involves an experimental *B*-field device that occurred to me while reading Edward Leedskalnin's books written during and after this completing his remarkable south Florida massive stone structures.

If you're not familiar with Coral Castle, the Wikipedia entry[244] will bring you up to speed.

> "The grounds of Coral Castle consist of 1,100 short tons (1,000 t) of stones in the form of walls, carvings, furniture and a castle tower. Commonly believed to be made of coral, it is made of oolite, also known as oolitic limestone. Oolite is a sedimentary rock composed of small spherical grains of concentrically layered carbonate that may include localized concentrations of fossil shells and coral. Oolite is found throughout southeastern Florida from Palm Beach County to the Florida Keys. Oolite is often found beneath only several inches of topsoil, such as at the Coral Castle site.
>
> The stones are fastened together without mortar. They are set on top of each other using their weight to keep them together. The craftsmanship detail is so skillfully, and the stones are connected with such precision that no light passes through the joints. The 8-foot (2.4 m) tall vertical stones that make up the perimeter wall have a uniform height. Even with the passage of decades and a direct hit on August 24, 1992, by the Category 5 Hurricane Andrew, the stones have not shifted.
>
> Many of the features and carvings of the castle are notable. Among

> them are a two-story castle tower that served as Leedskalnin's living quarters (walls consisting of 8-foot-high pieces of stone); an accurate sundial; a Polaris telescope; an obelisk; a barbecue; a water well; a fountain; celestial stars and planets; and numerous pieces of furniture. The furniture pieces include a heart-shaped table, a table in the shape of Florida, twenty-five rocking chairs, chairs resembling crescent moons, a bathtub, beds and a throne.
>
> With few exceptions, the objects are made from single pieces of stone that weigh on average 15 short tons (14 t) each. The largest stone weighs 30 short tons (27 t) and the tallest are two monoliths standing 25 ft. (7.6 m) each."

The Leedskalnin Coral Castle is a remarkable project. I've visited the site three times, and every time you walk away scratching your head. How did he do it?

There are plenty of theories out on the Internet about it, including several sites claiming his results were the result of persistence in applying known construction and physical principles.

Perhaps the best summary appears on the www.livescience.com website where the rumors of the paranormal are sliced, diced, and dashed[245]…

> "Though Leedskalnin worked alone, he was not a reclusive hermit; he had friends who he saw often. One man, Orval Irwin, was not only a long-time friend of Leedskalnin's but also a building contractor with a deep knowledge of construction techniques. Irwin wrote a 1996 book with the inspiring title "Mr. Can't Is Dead! The Story of the Coral Castle," and in it he explains, through photographs, drawings, and schematics, how it was done.
>
> Irwin pours cold water on the paranormal theories that unknown energies, alien technology, or levitation built the castle. In fact, he finds such theories an insult to the hard work and integrity of his friend: "Back in the days when Ed started carving out his original stones," Irwin writes, "his was a generation who knew accomplishments by the sweat of the brow. It wasn't mysticism but hard work, this is how Ed really accomplished the massive project...." (Of course, if Leedskalnin

had used powerful supernatural assistance he likely could have constructed the castle in weeks or months instead of decades.)”

To be sure, there’s a convincing story to be found on the *LiveScience* site[246].

But, there is another view as well: A friend of mine, has made his fortune in buying and developing cell tower properties around the country, has been researching this for nearly 40 years.

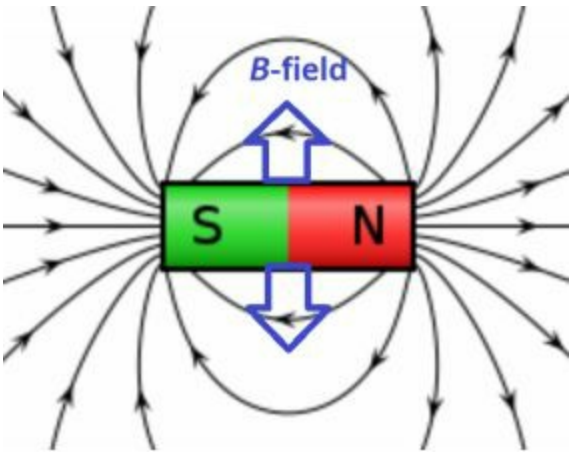
He is convinced that Leedskalnin was onto something more than the clever balancing of rocks, the adroit use of levers, and so forth.

Instead, this serious lifelong ham radio operator who I’ve known since age 15, has come to believe that Leedskalnin was onto something called the *B*-field in magnetics.

You may have to root around in the archives over at Robert A. Nelson’s excellent website *Rex Research*[247] but it was there I found a lecture by James Clerk Maxwell that explained everything clearly.

Maxwell begins his lecture by pointing out some of the obvious properties of a simple bar magnet. A North pole and a South pole. As most children see in school, there is a nice pattern of iron filings between the poles; perhaps shaped as a dog bone to some.

He then points to the oddity in magnetism: What is the force (shown in blue) that *pushes the magnetic field away* from the center of the magnet?



This is describes as the *B*-field.

Can the *B*-field be manipulated, and if so, how? Acoustically, perhaps?

Static electricity? More experiments loom.

B-fields and Coral Castle?

This is where my buddy (Vince) catches the whole, through which a next-level of science could emerge, literally at "any old time."

Going through Coral Castle as I have, I noticed something that intrigued the hell out of me: The large number of *old 6-volt car radio chassis's*.

If Leedskalnin was really building the Castle using the principles ascribed to him by debunkers?

Let me share a theory with you, since you suffered through some basic electronics with me earlier.

In a super heterodyne radio, prior to the evolution of both mechanical and crystal filters to improve selectivity of radios, a device called a "Q-multipler" was often used. Even to this day, I still believe Q-multipliers are in some ways superior to crystal, mechanical, and even DSP processing for a number of reasons.

The actual construction of a Q-multipler is not particularly difficult: One simply builds what would normally be another local oscillator and then controls the amount of feedback, such that it doesn't *quite* oscillate. If you don't get the adjustment exactly right, you will hear a sound in your ears that will make you rip off headphones.

But, at that precise instant *before* feedback (and the resulting oscillation) the Q (or *quality*) of the tuned circuit of the mixer's output section becomes *incredibly high*.

OK, fine. What's *Q* then?

It is a quality measurement of an inductor (coil). It is simply stated as the *inductive reactance* divided by the *series resistance* of a coil. The more detailed Wiki goes like this[248]:

> "An ideal inductor would have no resistance or energy losses. However, real inductors have winding resistance from the metal wire forming the coils. Since the winding resistance appears as a resistance in series with the inductor, it is often called the series resistance. The inductor's series resistance converts electric current through the coils

into heat, thus causing a loss of inductive quality. The quality factor (or Q) of an inductor is the ratio of its inductive reactance to its resistance at a given frequency, and is a measure of its efficiency. The higher the Q factor of the inductor, the closer it approaches the behavior of an ideal, lossless, inductor. High Q inductors are used with capacitors to make resonant circuits in radio transmitters and receivers. The higher the Q is, the narrower the bandwidth of the resonant circuit.

The Q factor of an inductor can be found through the following formula, where L is the inductance, R is the inductor's equivalent series resistance, ω is the radian operating frequency, and the product ωL is the inductive reactance:

$$Q = \frac{\omega L}{R}$$

Notice that Q increases linearly with frequency if L and R are constant. Although they are constant at low frequencies, the parameters vary with frequency. For example, skin effect, proximity effect, and core losses increase R with frequency; winding capacitance and variations in permeability with frequency affect L."

Therefore, as we go looking to replicate the results of Tibetan monks with a collection of long-horn trumpets and 13-drums, we might as well use the test bed for a few other experiments that arise because of Leedskalnin (and indirectly Vince).

Specifically, when electromagnetic fields interact, is there any change in their weight or apparent mass? If so, what frequencies and amplitudes are optimal?

Further, since Leedskalnin was ever the tinkerer, might he have stumbled into some not-yet documented effect, and if so, what might that be?

Obviously, if you have two coils driven separately by amplifiers with controlled feedback, is there an interaction between *two fields at extremely high Q* that isn't apparent in the "normal" range of Q? If so, how would this effect (or create) the *B*-field? And IF it creates the *B*-field, is this a *steerable*

property?

Last, but not least, I have created a special series of coils that consist of solenoid windings arranged in such a manner as to present a *B*-field to the center of a test platform. The design is simply eight solenoids arranged so that there are four areas of large-scale repulsion.

Since it's a wound coil, and since we have *D.C. to Daylight* on the bench, running some tests would prove interesting.

Finally, could the key to hacking space-time have been there before our eyes for 2,000 years?

What would happen if we were to wind small inductors and arrange them in the configuration of the Kabbalah (Tree of Life) configuration as shown in the Introduction chapter?

Sure, sure. Low-probability science. Or, is it?

One thing is for sure: The design of the experiments is non-trivial.

24. What we Expect

[**High-level:** There's little point to research if it can't be reduced to *practicum*. So, let's take a whack at *that* little problem…]

The first series of experiments is not expected to produce results. However, it will be conducted with an eye toward identifying any equipment issues. This round will include low (20Hz) to high (20 KHz) audio. From there, RF energy from 9 KHz to 500 MHz will be tested using both resistive loads at the low frequencies and an assortment of small dipoles at the high frequencies (>80MHz).

The second series of experiments may produce only very minor results. It will be performed with two radiative sources placed at right-angles to one-another. The sources will be fed in phase from a common signal source.

Again, the testing will run through audio spectrum from a low of (20Hz) to high (20 KHz) audio. From there, RF energy from 9 KHz to 500 MHz will be tested using both resistive loads at the low frequencies and an assortment of small dipoles at the high frequencies (>80MHz).

The third series of experiments will involve efforts to create a transverse wave. Thus, the right-angle radiators will be used, only this time set to *different* frequencies.

For example, attention will be paid to the 2,500 RPM frequency that translates to 41.667 Hz. The orthogonal radiator will be fed signals over a wide range, but with offset emphasis on Schumann resonances. These will, of necessity, be based on experimental application since the Schumann resonances "wander around a good bit." We will poke around from 7 Hz up to 50 Hz for primary effects[249]:

> "This global electromagnetic resonance phenomenon is named after physicist Winfried Otto Schumann who predicted it mathematically in 1952. Schumann resonances occur because the space between the surface of the Earth and the conductive ionosphere acts as a closed waveguide. The limited dimensions of the Earth cause this waveguide to act as a resonant cavity for electromagnetic waves in the ELF band.

> The cavity is naturally excited by electric currents in lightning. Schumann resonances are the principal background in the part of the electromagnetic spectrum from 3 Hz through 60 Hz, and appear as distinct peaks at extremely low frequencies (ELF) around 7.83 Hz (fundamental), 14.3, 20.8, 27.3 and 33.8 Hz.

We previously noted Tesla's use of a 7.32Hz frequency, as well.

The fourth round of experiments will be a replication of round three but with the addition of a pulsed-low frequency at the center position in the Kjellson drawings.

We note that this could be very time-consuming because of the wide range of possibilities involved. We note the wide spread of cycles lengths in our "Tire Thump" Appendix 5.

This will be an especially difficult section which will need to be performed two different ways.

Experiment 4-A will involve using a tunable-duration sample of the estimated frequency of a 14" tire at 30-38 LBS of pressure. This will have to be derived experimentally from doing some sampling with a good audio recorder and then playing it back in *Samplitude* and noting the fundamental and harmonic frequencies. While this may "get close…"

Experiment 4-B will rerun the same experiment only this time using a drum sample (pitch-shifted) from *Reason Essentials* and adjusted to the pulse rates calculated for given frequencies.

Remember, this is where we have the "double hit" problem of front tires and then back tires hitting the expansion joints.

Experiment round five is where we may begin to see substantial results. This is where we will try the one-wavelength passive reflector which we have calculated for the Kjellson data.

Another observation in passing: This critical role of the out of phase reflected wave inducing an antigravity effect would account for the *sudden rise* of the Gernon lenticular cloud. Of course, it would come zooming up!!!

This gives us a round 5A (in-phase), round 5B (inverse phase) and 5C (if any

effect has been found yet) a phase-tuning and optimization round.

Round six of experiments is the best outcome of 5 A-C and then with added light at angles calculated from Gernon’s flight date, time, and solar position.

Round seven, adds RF at different frequencies and notes whether an effect appears or is amplified.

Ark of the Covenant: An Acoustical Device?

Then there is the Ark study. There is simply too much conflicting data on the proper length of the Biblical cubit to make any real claims about the "proper size" of an Ark replica to investigate its "sounding" properties.

Although some point to Sir Isaac Newton's thinking on the matter, his calculations include quaint (by modern terms) ideas like the Earth having a more or less *regular* diameter. Which today we know is not true. Never the less his thoughts on the "Sacred Cubit of the Jews[250]" seems to hold sway.

After nearly 100 test-runs through an acoustical resonance calculation program, there's nothing particularly special about the "alleged" sacred cubit of 25 (and a fraction) inches.

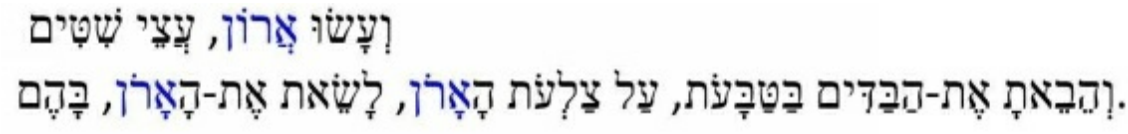
What makes this a serious side-trip worth considering, though, is that by understanding the primary resonances of the Shofar (around 375 Hz) and then looking at the Ark as an acoustical enclosure problem (with piezo electric crystals, perhaps) on the inside, we might gain a different back-engineered answer to the proper length of the Sacred Cubit.

And with that might come breakthroughs, in among other things, music.

I described the beginning of my research into the *Ark* in a 2017 column on my UrbanSurvival website[251]:

> "Since the phenomenon seems to be acoustic, it bears a striking resemblance to "the voice of the Lord" which appears "in a cloud" between to cherubim on top of an Ark of specific dimensions made of acacia wood.
>
> And that's why I called in the "A-team" to work the problem because something was amiss: Which variety of acacia… (shittim wood) …and was the Ark of the Covenant powered by sound as my research was beginning to imply?
>
> Let me share Chris Tyreman's (of *The Chronicle Project*[252]) response to my inquiry…
>
> "I assume Ure…have they changed stuff in the bible…is sarcasm.
>
> Try…what have they not changed.

verse ten, then 14. I have blued the word ark. Notice the difference. The first one appears about 19 times, the second one about 129 times. Both are different words. They say there is also a third spelling, but I have not yet seen it. This is not to be confused with Noah's ark, a completely different word.


וְעָשׂוּ אֲרֹן, עֲצֵי שִׁטִּים
וְהֵבֵאתָ אֶת-הַבַּדִּים בַּטַּבָּעֹת, עַל צַלְעֹת הָאָרֹן, לָשֵׂאת אֶת-הָאָרֹן, בָּהֶם.

The second spelling means…***the to begin to sound***, I have to check if any wooden box was ever made using that name or if it exclusive to the Ark of the Covenant.

A lot of the descriptions here are damaged or vague translations, but I don't know if I have hit the point where I can give an accurate restoration.

The names of the wild acacia found in Israel are:

- Acacia raddiana
- Acacia albida
- Acacia torilis
- Acacia gerradrii ssp. Negevensis

Reading Chris' email, it matched up with my friend "*the major's*" work – which went more into the characteristics of the sound of the shofar (and types of acacia wood).

Remember that the shofar is mistranslated as "trumpet" because in fact is sounds more like a *tuba* with that kind of "farty" note – also common to the *dengchens* and *ragdons* of Tibet.

One part of the major's (9 detailed pages) cited a source that wrote:

> *" Such neumes are to be found in the "Siddur" of R. Amram (ed. Warsaw, 1865, p. 45b), in a late fourteenth-century manuscript (Codex Shem, No.74, in the Parma Library), and in Juan de Gara's small Ma? zor (p. 190, Venice, 1587). The Parma notation, entitled in the manuscript in question "Simani Noti," is reproduced in Sulzer, "Shir ? iyyon," ii. 153, as follows:…"*

There are 10 main *ancient* shofar sounds, but it seems likely that a different one (or some combination of sounds) was used to "shake down" the Jericho walls. Missing is the instruction set for blowing this sound. We know 376 Hz is approximate primary frequency, but tonal variations could take us anywhere, particularly because of the "beat notes" (audio heterodynes, eh?) produced by the interactions between six or seven shofars, all sounding at the same time.

Yet another curiosity: Tibetan levitation was done with 6 trumpets and 12 main drums (a 13th seemed to have been used as a timing drum) in a specific arrangement. And it's clear in the literature that about every 5th to 8th stone the monks tried to levitate with sound would simply disintegrate over the lifting, collapsing in a heap of rubble.

The Tibetan stones that were "thrown up mountains" by the trumpets were not the same material as the biblical Jericho. We would expect Tibetan stones to be basaltic or perhaps quartz.

Yet, Jericho's walls were made of crude bricks, sunbaked clay most likely. Despite this, the destructive effect was similar. The commonality is the presence of multiple sound sources.

25. Proposed Conclusions of This Book

Every book requires an ending. Conclusions are nice, too, if the data supports such claims.

While we have "jumped-around" a LOT there should be by now a general *flow* to what's been presented.

In the first chapter, we discussed the idea that there are *mental and spiritual* realms. We're not sure how these operate, but what we know is they are "real" at deep spiritual levels. Since the brain is an electro-chemical (and light) processor, we can intelligently frame some questions. Where do we all "go" upon Death?

We then explored – in our first brush with *plasma* – the idea that plasma clouds may exist in space and these may *reflect* radio-frequency energy. But, as the evidence shows, if plasma indeed reflects, it seems to do so in a way that ignores the conventions of the "normal" electrical properties (of E/M fields) summarized in the inverse square law[253].

While I was finalizing this book, an important real-life event from my "radio childhood" came back to me: It's well-described how a fluorescent tube will *light* in the presence of radio-frequency energy. When my childhood ham radio buddy, WA7BRI and I were playing with antennas, we would take some delight in transmitting while walking near our antennas holding up fluorescent tubes.

The remarkable thing about the experience was not that light was generated. It was, at least to me, that the light was *cold*. In other words, the mercury vapor in the tube would become excited at the molecular level by radio frequency vibrations without the need for the higher voltage typically used to fire the vapor in home and office lighting.

We then wandered through both the Philadelphia Experiment – and were surprised to find mention of three different ships that may have been involved. In the case of the purported Montauk Project, there was the additional aspect of high-powered microwave radio gear on site.

However, when we really dug down into the extremely credible report of Bruce Gernon's flight through an "electronic fog" that "spun instruments wildly" on a flight from Andros Island in the Bahamas to West Palm Beach, Florida (and the related inspection of earth's electrical energies, earthquake clouds, Seneca Guns, and more) that the presence of a *lenticular cloud* and attendant *rising rotary winds* coupled with a cold, dry weather front, may have created the proper atmospherics for a cold plasma event.

Inspection of history revealed commonalities between the Gernon book and the *Beaufighters* of World War II and the TBM Avengers such as went missing to become the mysterious *Flight 19* so popular in Bermuda Triangle lore: The Wright *Cyclone* series radial engines.

To be sure, such occurrences are rare. But, a former FAA official[254] told me in private correspondence that it aircraft positions to (rarely) skip a beat. Usually below 10,000-feet MSL, and generally slow-movers like propeller-driven aircraft are involved. The term controllers use is "target jump."

> "*Though, the jumps are normally small and within the distance the target would be expected to have moved during that sweep of the radar. Jumps happen but only get noticed when it's moving in the "wrong" direction. It doesn't get much attention except in certain circumstances, and is normally of no concern as long as the target goes back on track after one or two sweeps or updates of the radar."*

The sources of such "jumps" are written off as electronic, but is that 100% of cases? The computer-integration of the national airspace over the U.S.A. certainly accounts for *most* oddities. But, the key question is whether it account for ALL - meaning *100-perdcent of such cases*?"

The book then reviewed other aspects of audio frequencies adjacent to anomalies ranging from anecdotal occurrences of "missing time" while people have been traveling on long car trips as well as the possible role of pavement expansion-joints in creating a "beat" that may *synchronize* whatever the phenomenon is that is causing these anomalous events.

When taken with the credible Swedish account (circa 1939) of megalithic stone levitations in Tibet using a combination of drums and trumpets (dengchens or ragdons) a theme of specific "*resonances*" emerges from the

literature.

The Ark of the Covenant, too, was inspected. And using new approaches to linguistic translation[255], we discover that not only does the work “Ark” mean *box or vessel*, but it has another, more subtle meaning, which is “*to sound*.” So, again, the link to acoustics.

Are suspended particulates critical to the formation of low-temperature acoustically-pumped plasmas? Anyone who has been to the Caribbean knows of the afternoon cooking fire smoke. Were the *Beaufighters* over the European combat theater in light smoke when “Foo-Fighters” first appeared? And does this some-how tie-back to the Biblical calls for a “blood offering” and a “grain offering?” Is God somehow pleased to appear at the Mercy Seat when favored by the smell of burnt toast? The mind reels as the pieces begin to fall into place.

Yet not on command. At least, not yet.

When you think about it, the implications of acoustically-pumped cold plasma are nothing short of breathtaking.

The Enfolded Universe?

It is even more breathtaking if - as I propose – there exists such a cold plasma; one that might bend time, or perhaps even control gravity.

There is a term in software engineering to consider here: The "***container***." It's obvious that some phenomena already function as "*containers*" for larger forces, only unveiled in the past few hundred years.

Everyone *knows* that electricity is a "*container*" in this sense: It *contains* both an electrical field (E) and magnetic field (M).

Is it possible that "*enfolded fields*" for scalar energies such as *time* and *gravity* could be enfolded into certain plasma excitation states?

As early as 2007, C.A. DeJoseph was reporting "Nonlocal effects in a bounded low-temperature plasma with fast electrons.[256]"

I'm going to ask you to step out here onto the bleeding edge of inquiry here and consider this:

What *IF*, unlike DeJoseph's use of *electrons* we can resolve a "jump-state" using particle and wind-induced static to initially *fire* a low temperature plasma that could then be *sustained* with an audio field of specific characteristics? The *Shofar* series, for example, pulsed in a way not currently public?

All of this circles-back to the idea from Chris Tyreman: That the *Ark* have required *sounding* in order to light a low-temperature plasma on the *Mercy Seat*[257].

While we have some cultural experience with plasma, especially in common industrial goods such as plasma cutting torches for metalworking and plasma displays for computers, is it possible that analogs of the (E) and (M) fields of electricity are lurking just out of sight?

I believe it is *at least possible*. Which means deserving of research.

Because of this, we should take a fresh look while there is time and resource. Humankind needs a new and larger goal to break out of its "social media mania" and "whiner" mentality of "social 'just-us'" and get back to a fresh

set of eyes on basic science.

We know from ancient Sanskrit texts that there **may have** been a previous global high culture before the current round in the Common Era, and whose roots can be traced back to "The Flood." Was 'the flood' allegorical? Was there a planetary crustal shift? A cosmic "wanderer" as Clube and Napier[258] have proposed? Or, did we get to the *Ultimate Power* before and simply blow up the ancient world?

Were the "Vimanas" – legendary flying machines of ancient India real? And were the ancient people of the Sanskrit language holders of knowledge more useful knowledge than our modern-day quest for "*the God Particle*?"

Sadly, lab equipment for this project has cost enough. A single text to study may cost several hundred dollars[259]. Perhaps it's time to lay out the notion in public.

Will any of it work? All the research and effort? Beats me. The only three promises for sure in this life are it begins, it gets taxed, and it ends. Fun, eh?

Like the problem of the ultra-high mileage gasoline vapor carburetors – seized on by special interests to keep profits high - we will have our work cut out for us for decades to come. That's because we live on a *monetized* planet where there are sharp divisions between the "have's" and the "have-not's."

That doesn't mean there *isn't* an answer to the questions raised herein.

It simply means we've been lazy because we haven't figured it out - Yet. Sadly, we have invested precious time and resources in things like "*social media*" where our best-case scenario is akin to mob rule under a Second Tower of Babel.

Naturally, when sought-after by icon-pressing apes, it's not especially surprising that the answers remain safely locked up in the *Dimensions Next Door*.

One Final Research Note

There are very specific directions that *might* be extensibly interpreted as instructions how to "light a cold plasma" on the *Ark of the Covenant* in early editions of the bible. For example, this from the 1599 *Geneva Bible*[260]:

> 39 The one lamb thou shalt present in the morning, and the other lamb thou shalt present at even.
>
> 40 And with the one lamb, a [p]tenth part of fine flour mingled with the fourth part of an [q]Hin of beaten oil, and the fourth part of an Hin of wine for a drink offering.
>
> 41 And the other lamb thou shalt present at even: thou shalt do thereto according to the offering of the morning, and according to the drink offering thereof, to be a burnt offering for a sweet savor unto the Lord.
>
> 42 This shall be a continually burnt offering in your generations at the door of the Tabernacle of the Congregation before the Lord, where I will [r]make appointment with you, to speak there unto thee.
>
> 43 There I will appoint with the children of Israel, and the place shall be sanctified by my [s]glory.
>
> 44 And I will sanctify the Tabernacle of the Congregation and the Altar: I will sanctify also Aaron and his sons to be my Priests,
>
> 45 And I will dwell among the children of Israel, and will be their God.
>
> 46 Then shall they know that I am the Lord their God, that brought them out of the land of Egypt, that I might dwell among them: [t]I am the Lord their God."

This clearly seems to suggest that when *cold plasma* is in the works, certain suspended particulates (frankincense, myrrh, wheat, animal blood) may create a particular mix of suspended particulates that could fire the effect.

One might look at the 1899 Douay-Rheims bible's take on Chronicles 6:39[261]:

> "But Aaron and his sons offered burnt offerings upon the altar of

> holocausts, and upon the altar of incense, for very work of the holy of holies: and to pray for Israel according to all that Moses the servant of God had commanded."

The language seems odd: Do the early translations tell us there must be burnt offerings for the (cold plasma effects) to work?

And is another hint contained in Revelations 9:13[262]?

> "And the sixth angel **sounded the trumpet**: and I heard a voice from **the four horns of the great altar**, which is before the eyes of God,"

OK, five acoustical sources it is, then. Four in a rectangular and one off-axis, perhaps?

Time to light some more incense, burn some oiled flour, and turn on the equipment in the lab again…

26. Appendices

Appendix 1: Notes of Matrix Thinking

Here is a short course on how the Seven Major Systems of Life, detailed in *The Millennial's Missing Manual* operates.

The seven systems are: Food, shelter, communication, transportation, environment, energy, and finance.

To "deeply understand" Food, for example, you need to see – at a flash - how it touches the six other systems and how to *control* and *manipulate* those boundaries between the systems. That's because the system boundaries are where human "*invention*" takes place.

Food interacts with Housing along a vast continuum. There is a building on many farms that holds crops before delivery for processing or sale. You have seen grain elevators, no doubt? Grocery stores also *house* food, but so does the *house* in which you live. Zooming in further at the end of this continuum we find what? A refrigerator that *houses* the perishable food while it waits to be *housed* in your stomach!

Food has Communication aspects, as well. These range from pollination at the field level to the required nutritional labeling when sold at retail. Orders from the grocery to the warehouse, buyers to farmers, and more. Even the sticky note left by your spouse "*Working late, warm this up…*" is food communication.

Food's Energy aspects include the diesel fuel powering farm equipment to the natural gas turned into ammonia, other fertilizers, and pesticides. Energy chills the food storage housing, it lights the vegetable displays, and it powers the television cooking shows (more food communications and energy). It's also hard to cook Food without Energy. Even solar ovens are a form of it.

Transportation of Food is no small deal: The 3,000-mile salad is well-described in the literature. Food travels from coast to coast, from sea to supermarket, and some is flown-in for special occasions. The final transportation segment is usually a ride home in the car from the grocery Shelter to the family Housing unit.

Environmentals and Food interact in another hugely complex way: Pesticide

residuals, ratios of sunlight to clouds in a growing season along with other weather aspects like rainfall and the temperature, wind, humidity, and soil structure. Erosion and depletion? Sure, throw them in too; what the hell.

Lastly, Food demands a price in the Financial arena. How high, or low, depends on how many people are involved in the Food matrix. With more processors, handlers, and more energy inputs, the price paid by consumers is moves higher, while lower prices (albeit with less convenience) come with simpler processing, natural storage, as more raw foods. Everyone has their hand out for a piece of the financial action when hunger is on the menu.

Appendix 2 Statitronics Experiment Notes, Ure 2004

These notes are intended to show the kind of lab notes that would be useful to other investigators considering a new field or phenomenon.

(from 2004) **Research Experiment #1 Background:**

The purpose of this experiment is to attempt to replicate a free energy accumulator, for which construction information is offered on the Internet for $8 from a fellow free energy explorer in British Columbia.

The gist of his notion is that:

- Free energy is real
- It may be extracted with relatively low-cost apparatus.
- It will not produce a *lot* of power.
- It will produce substantial voltage (e.g. >20 volts) over time.

When I read the report, this fellow had put together what it lacked, and the reason I am writing these notes is to further the discussion of *recoverable* free energy is it lacked the sophistication that I'm used to dealing with after working should-to-shoulder with some of the best energy engineers in the world.

Set Up

The booklet that I received from the Internet advertising was not what I expected. It was a lot of history and here say about various inventors, but didn't have the kind of details that I expect because my functions (to say it once again) is to come up with a way to power a battery charger than consumes 2-3 watts. If I can't get that from any so-called "free energy" device, then my interest level goes to zero. Think of it as trying to date the best-looking person of the opposite sex in high school. There may be a certain thrill of the pursuit, but it you aren't going to "catch it" in the end, why waste your time? I think you can see why I was considered a "nerd" even before computers with this kind of attitude.

The major failing of the Internet booklet was that it didn't talk about the length of antenna, whether it was insulated or bare wire, what its

orientation was, or any of those hundred and one details that, at least in competitive ham radio antenna design, make the difference between being an HF guru and a low signal loser in the hobby. I'm a guru, thanks.

The author of the booklet says "antenna" and it operates against a "ground" described as a ground rod driven into the earth 6-7 feet.

Let me show you the "antenna" we'll be using for this first experiment. It's the metal roof of my office building/ shop on my ranch in East Texas. It looks suspiciously like this:

Pictures of the test site and diagrams followed in laborious detail. Here's a typical entry:

"Above, we can see the internal calibration of the 1-volt peak-to-peak 1 KHz reference. On the left, we see two divisions of the 0.5 Volt scale while on the right we see five divisions of the 0.2 Volt scale. In pictures, you'll notice as we progress through this research, you'll see a small horizontal grid. The particular 'scope I'm using, a Kenwood CS-5130 dual trace, 40 MHz scope, has a voltage and time cursors that allow you to set the bottom of a trace and measure to the top. It saves time trying to interpolate between divisions on the scale especially as we will be making some rapid measurements about one per 15-seconds. That doesn't leave much time for interpolation!"

The point of this level of detail in experimentation is important: If a breakthrough were recorded, or even a good anomalous event, the entire experiment would have been documented.

Appendix 3. Kjellson's Two Instrument Levitation Description

This is a machine translation from Swedish of the pertinent chapter from *Teknik 1 Fortiden*:

"He was present when a large magazine was built using tones. Two musical instruments and two reflector screens were used. One instrument was a giant, vertically suspended gong with 3.5 meters diameter and consisting of three circular fields of different metals. The center was of pure gold, so soft that it could be scratched with nails. The next field was a circular ring of pure iron, and the outer ring-shaped field was of an extremely hard, elastic, yellowish bronze. In the battle against the gong, a lazy tone was produced.

The second instrument was a slightly-stuck oval bowl or mussel-shaped seal, about 2m long and 1m wide. It was made of the above-mentioned mysterious metals and fitted with strings stretched over the edge. This instrument was not processed, but produced by the first instrument some kind of unreasonable reso-nanswågor (resonance), as stated. Both instruments were placed at the tip of the triangle formed by the screens. In battle against the gong, "matter" was created at a certain distance from there, and the creation was directed by

the screens.

Appendix 4: Approximate Frequency Conversions

Freq Hz	Length in Feet	1/2 λ length	1/4 λ Length	1 λ Meters	1 λ Inches	EM 1 λ
0.00977	115405	57712.64	28856.32	35175.38	1384857.6	
0.01953	57702.4	28856.32	14428.16	17587.69	692428.8	
0.03906	28851.2	14428.16	7214.08	8793.846	346214.4	
0.07813	14425.6	7214.08	3607.04	4396.923	173107.2	
0.15625	7212.8	3607.04	1803.52	2198.461	86553.6	
0.3125	3606.4	1803.52	901.76	1099.231	43276.8	
0.625	1803.2	901.76	450.88	549.6154	21638.4	
1.25	901.6	450.88	225.44	274.8077	10819.2	
2.5	450.8	225.44	112.72	137.4038	5409.6	
5	225.4	112.72	56.36	68.70192	2704.8	
10	112.7	56.36	28.18	34.35096	1352.4	
20	56.35	28.18	14.09	17.17548	676.2	
40	28.18	14.09	7.04	8.589264	338.16	
50	22.54	11.27	5.64	6.870192	270.48	
60	18.78	9.39	4.7	5.724144	225.36	
80	14.09	7.04	3.52	4.294632	169.08	
90	12.52	6.26	3.13	3.816096	150.24	
100	11.27	5.64	2.82	3.435096	135.24	
120	9.39	4.7	2.35	2.862072	112.68	
150	7.51	3.76	1.88	2.289048	90.12	
180	6.26	3.13	1.57	1.908048	75.12	
190	5.93	2.97	1.48	1.807464	71.16	
200	5.64	2.82	1.41	1.719072	67.68	
210	5.37	2.68	1.34	1.636776	64.44	
220	5.12	2.56	1.28	1.560576	61.44	
230	4.9	2.45	1.23	1.49352	58.8	
250	4.51	2.25	1.13	1.374648	54.12	
280	4.03	2.01	1.01	1.228344	48.36	
300	3.76	1.88	0.94	1.146048	45.12	
350	3.22	1.61	0.81	0.981456	38.64	
400	2.82	1.41	0.7	0.859536	33.84	
500	2.25	1.13	0.56	0.6858	27	
1000	1.13	0.56	0.28	0.344424	13.56	
2000	0.56	0.28	0.14	0.170688	6.72	
2500	0.43871	0.21935484	0.10967742	0.133719	5.26451613	
5000	0.23	0.11	0.06	0.070104	2.76	
8000	0.14	0.07	0.04	0.042672	1.68	
10000	0.11	0.06	0.03	0.033528	1.32	
14000	0.08	0.04	0.02	0.024384	0.96	
15000	0.08	0.04	0.02	0.024384	0.96	
18000	0.06	0.03	0.02	0.018288	0.72	
20000	0.06	0.03	0.01	0.018288	0.72	
40000	0.02818	0.01409	0.00704	0.008589	0.33816	
80000	0.01409	0.007045	0.00352	0.004295	0.16908	
160000	0.007045	0.0035225	0.00176	0.002147	0.08454	6044.203
395 KHz						2448.285

Appendix 5: Tire "Thump" Gating Frequencies

Expansion Joint Pulse Frequency in Hz												
	30	29	28	27	26	25	24	23	22	21	20	19
55	2.69	2.78	2.88	2.99	3.10	3.23	3.36	3.51	3.67	3.84	4.03	4.25
56	2.74	2.83	2.93	3.04	3.16	3.29	3.42	3.57	3.73	3.91	4.11	4.32
57	2.79	2.88	2.99	3.10	3.22	3.34	3.48	3.63	3.80	3.98	4.18	4.40
58	2.84	2.93	3.04	3.15	3.27	3.40	3.54	3.70	3.87	4.05	4.25	4.48
59	2.88	2.98	3.09	3.20	3.33	3.46	3.61	3.76	3.93	4.12	4.33	4.55
60	2.93	3.03	3.14	3.26	3.38	3.52	3.67	3.83	4.00	4.19	4.40	4.63
61	2.98	3.09	3.20	3.31	3.44	3.58	3.73	3.89	4.07	4.26	4.47	4.71
62	3.03	3.14	3.25	3.37	3.50	3.64	3.79	3.95	4.13	4.33	4.55	4.79
63	3.08	3.19	3.30	3.42	3.55	3.70	3.85	4.02	4.20	4.40	4.62	4.86
64	3.13	3.24	3.35	3.48	3.61	3.75	3.91	4.08	4.27	4.47	4.69	4.94
65	3.18	3.29	3.40	3.53	3.67	3.81	3.97	4.14	4.33	4.54	4.77	5.02
66	3.23	3.34	3.46	3.59	3.72	3.87	4.03	4.21	4.40	4.61	4.84	5.09
67	3.28	3.39	3.51	3.64	3.78	3.93	4.09	4.27	4.47	4.68	4.91	5.17
68	3.32	3.44	3.56	3.69	3.84	3.99	4.16	4.34	4.53	4.75	4.99	5.25
69	3.37	3.49	3.61	3.75	3.89	4.05	4.22	4.40	4.60	4.82	5.06	5.33
70	3.42	3.54	3.67	3.80	3.95	4.11	4.28	4.46	4.67	4.89	5.13	5.40
71	3.47	3.59	3.72	3.86	4.01	4.17	4.34	4.53	4.73	4.96	5.21	5.48
72	3.52	3.64	3.77	3.91	4.06	4.22	4.40	4.59	4.80	5.03	5.28	5.56
73	3.57	3.69	3.82	3.97	4.12	4.28	4.46	4.66	4.87	5.10	5.35	5.64
74	3.62	3.74	3.88	4.02	4.17	4.34	4.52	4.72	4.93	5.17	5.43	5.71
75	3.67	3.79	3.93	4.07	4.23	4.40	4.58	4.78	5.00	5.24	5.50	5.79
76	3.72	3.84	3.98	4.13	4.29	4.46	4.64	4.85	5.07	5.31	5.57	5.87
77	3.76	3.89	4.03	4.18	4.34	4.52	4.71	4.91	5.13	5.38	5.65	5.94
78	3.81	3.94	4.09	4.24	4.40	4.58	4.77	4.97	5.20	5.45	5.72	6.02
79	3.86	4.00	4.14	4.29	4.46	4.63	4.83	5.04	5.27	5.52	5.79	6.10
80	3.91	4.05	4.19	4.35	4.51	4.69	4.89	5.10	5.33	5.59	5.87	6.18
81	3.96	4.10	4.24	4.40	4.57	4.75	4.95	5.17	5.40	5.66	5.94	6.25
82	4.01	4.15	4.30	4.45	4.63	4.81	5.01	5.23	5.47	5.73	6.01	6.33
83	4.06	4.20	4.35	4.51	4.68	4.87	5.07	5.29	5.53	5.80	6.09	6.41
84	4.11	4.25	4.40	4.56	4.74	4.93	5.13	5.36	5.60	5.87	6.16	6.48
85	4.16	4.30	4.45	4.62	4.79	4.99	5.19	5.42	5.67	5.94	6.23	6.56
86	4.20	4.35	4.50	4.67	4.85	5.05	5.26	5.48	5.73	6.01	6.31	6.64
87	4.25	4.40	4.56	4.73	4.91	5.10	5.32	5.55	5.80	6.08	6.38	6.72
88	4.30	4.45	4.61	4.78	4.96	5.16	5.38	5.61	5.87	6.15	6.45	6.79
89	4.35	4.50	4.66	4.83	5.02	5.22	5.44	5.68	5.93	6.22	6.53	6.87

Other Books by the Author

Fiction:

Coming in 2018: ***Grav*** – a David Shannon Adventure (This present book is baseline research for this next novel.)

DreamOver – a David Shannon Adventure

Non-fiction:

The Millennial's Missing Manual

How to Live on $10,000 a Year…or less…

Broken Web: The Coming Collapse of the Internet

11 Steps to a Strategic Life (co-author with Gaye Levy)

On the Web:

www.urbansurvival.com (General interest, news, and economics)

www.peoplenomics.com (Proprietary financial models, long wave economics)

---

[1] https://en.wikipedia.org/wiki/Kenneth_Arnold
[2] https://en.wikipedia.org/wiki/CallAir_Model_A
[3] http://vintageaircraftmuseum.org/aircraft/call-air-a-2/
[4] http://www.khouse.org/articles/1997/110/
[5] https://en.wikipedia.org/wiki/Brewster%27s_angle
[6] https://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs
[7] https://en.wikipedia.org/wiki/Volcanic_pipe#Kimberlite_pipes
[8] https://www.physio-pedia.com/Proprioception
[9] https://en.wikipedia.org/wiki/Second_Council_of_Nicaea#Background
[10] https://simple.wikipedia.org/wiki/First_Council_of_Nicaea#Main_points
[11] https://en.wikipedia.org/wiki/Vatican_Secret_Archives

[12] www.peoplenomics.com

[13] Elaine Pagels • Harry Camp Memorial Lecturer, January 26-30, 2004 STANFORD HUMANITIES CENTER • http://shc.stanford.edu cited at http://holybooks.lichtenbergpress.netdna-cdn.com/wp-content/uploads/Gospel-of-Thomas-Scholars-Version.pdf.

[14] As one early reviewer of *Dimensions Next Door* offered: "…the modern context definitely struck me reading this passage - we ARE at that time (inner like the outer = quantum; upper like the lower = space exploration; male like female = transsexuality; eyes in place of an eye = social media; hand in place of a hand = robotic surgery or cyber limbs; foot in place of a foot = Mars rovers; image in place of an image = photography and electronic video.)

[15] http://urbansurvival.com/coping-my-long-delayed-echo-et-experience/

[16] https://en.wikipedia.org/wiki/Render_unto_Caesar

[17] http://www.pewforum.org/2014/02/10/russians-return-to-religion-but-not-to-church/

[18] http://biblehub.com/matthew/24-10.htm

[19] https://en.wikipedia.org/wiki/Low_intensity_conflict

[20] https://en.wikipedia.org/wiki/The_True_Believer

[21] https://en.wikipedia.org/wiki/Superposition_principle

[22] ibid

[23] https://en.wikipedia.org/wiki/Moir%C3%A9_pattern

[24] N.B. The bias occurs when selecting whether to instrument for *waves* or for *particles.*

[25] https://en.wikipedia.org/wiki/Schr%C3%B6dinger%27s_cat

[26] https://en.wikipedia.org/wiki/Reductionism

[27] https://lynnemctaggart.com/the-results-of-the-peace-intention-experiment/

[28] https://en.wikipedia.org/wiki/Starfish_Prime

[29] https://en.wikipedia.org/wiki/CERN#Member_states_and_budget

[30] https://en.wikipedia.org/wiki/Lop_Nur

[31] https://en.wikipedia.org/wiki/Management_by_objectives

[32] https://en.wikipedia.org/wiki/Leon_M._Lederman

[33] https://en.wikipedia.org/wiki/Leyden_jar (A primitive capacitor)

[34] https://en.wikipedia.org/wiki/Alessandro_Volta

[35] https://books.google.com/books?id=vDFGAAAAYAAJ&pg=PA321&lpg=PA321&dq=%22we+are+all+phantoms%22&source=bl&ots=WoQf2VGKJOJK3cnHmc&hl=en&sa=X&ved=0ahUKEwil79TEh4LXAhWEz4MKHZSeDtwQ6AEIS

[36] https://en.wikipedia.org/wiki/John_Kanzius#Water-as-a-fuel

[37] https://www.ill.eu/fileadmin/users_files/documents/instruments_and_support/sample_environment/Ever

[38] https://www.livescience.com/38181-soundwaves-levitate-objects.html

[39] http://gizmodo.com/this-120-anti-gravity-machine-beats-all-desk-toys-to-d-1620187244

[40] https://en.wikipedia.org/wiki/Electrodynamic_suspension#Bedford_levitator

[41] http://wrap.warwick.ac.uk/60500/1/WRAP_Hughes_1-s2.0-S096386951400070X-main.pdf

[42] https://en.wikipedia.org/wiki/Hertz

[43] https://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet65/oet65.pdf

[44] http://www.solidsignal.com/p/?p=2666&d=determine-cell-phone-range-wirelessadvisor.com&mc=07
[45] https://en.wikipedia.org/wiki/N,N-Dimethyltryptamine
[46] https://en.wikipedia.org/wiki/Nikola_Tesla
[47] https://hypertextbook.com/facts/2001/JacquelineLing.shtml
[48] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3685840/
[49] https://en.wikipedia.org/wiki/21_grams_experiment
[50] http://www.noeticscience.co.uk/weighting-the-human-soul/
[51] https://en.wikipedia.org/wiki/String_theory
[52] https://www.theatlantic.com/technology/archive/2017/06/artificial-intelligence-develops-its-own-non-human-language/530436/
[53]https://www.ncbi.nlm.nih.gov/pubmed/?term=lllt
[54] https://en.wikipedia.org/wiki/Tintype
[55] https://en.wikipedia.org/wiki/Instant_film
[56] http://rapiD.C.ityjournal.com/photos/top-atrocities-committed-by-christopher-columbus/collection_76ebb2b8-f63d-11e3-a137-001a4bcf887a.html
[57] http://americanindiansource.com/columbusday.html
[58] https://www.amazon.com/Europes-Inner-Demons-Demonization-Christendom/dp/0226113078
[59] https://en.wikipedia.org/wiki/Thermohaline_circulation
[60] https://en.wikipedia.org/wiki/Magnetic_declination
[61] https://www.amazon.com/1421-Year-China-Discovered-America/dp/0061564893
[62] https://en.wikipedia.org/wiki/Zheng_He#Early_life_and_castration
[63] https://en.wikipedia.org/wiki/Zheng_He
[64] https://en.wikipedia.org/wiki/Arawak
[65] https://en.wikipedia.org/wiki/Fata_Morgana_(mirage)
[66] https://earthobservatory.nasa.gov/Features/GRACE/page3.php
[67] https://www.newscientist.com/article/mg19826514-600-curious-cloud-formations-linked-to-quakes/
[68] https://en.wikipedia.org/wiki/Earthquake_light
[69] https://arxiv.org/ftp/arxiv/papers/0810/0810.0242.pdf
[70] http://www.inquisitr.com/2126887/ufo-shaped-lenticular-clouds-seen-over-texas-spark-haarp-weather-manipulation-conspiracy-theories/
[71] USAF “Weather as a Force Multiplier: Owning the Weather in 2025” http://csat.au.af.mil/2025/volume3/vol3ch15.pdf
[72] https://en.wikipedia.org/wiki/Lenticular_cloud
[73] http://www.paranoiamagazine.com/2016/08/12-devils-graveyards-around-world/
[74] http://www.dailymail.co.uk/sciencetech/article-2640056/Strange-flashing-lights-radiation-risks-The-bermuda-triangle-space-revealed-unprecedented-detail.html
[75] https://en.wikipedia.org/wiki/Tondidarou
[76] https://en.wikipedia.org/wiki/Sahara#History

[77] https://www.researchgate.net/profile/J-P_Liegeois/publication/249548659_Alkaline_magmatism_subsequent_to_collision_in_the_Pan-African_belt_of_the_Adrar_des_Iforas_Mali/links/00b49524f4a0fbf882000000/Alkaline-magmatism-subsequent-to-collision-in-the-Pan-African-belt-of-the-Adrar-des-Iforas-Mali.pdf

[78] http://anomalyinfo.com/Stories/1874-man-eating-tree-madagascar

[79] http://www.geos.ed.ac.uk/~whaler/ranganai_et_al_gravity.pdf

[80] http://onlinelibrary.wiley.com/doi/10.1029/95JB00613/abstract

[81] https://oup.silverchair-cdn.com/oup/backfile/Content_public/Journal/gsmnras/7/4/10.1111/j.1365-246X.1956.tb05562.x/2/7-4-162.pdf?Expires=1503337206&Signature=Zl8TeYCrU-VUEihDJsVr~BZ6jehBM3Ue2ZNkTR6fZdgOsr-RZzqz588Og~Ax~fEKPIjfxIxV7ijl3xcXu~tM2lB-g6vL40y99TKd87eUVjR~Eu9iKd-0kvbZFnozXiwCEIhROwTZuF1uD52hjlFqsZJTqJ-PgaHVy1UqXzcmXwgw2jUhrNE7b1UYURIATqYR3eQFsXJKcxlxKc7E2W7dJcqujMlwomhkUnclhy AcVIXy23xx4WpKdKpT60pyDJ4OCGWQox-X4ZHHpiCQOuda5eS4WpsuwyLQ0jFN6g~4sL6-~w~CAL2tMMFRDwj5w__&Key-Pair-Id=APKAIUCZBIA4LVPAVW3Q

[82] Ibid

[83] http://www.geo.utexas.edu/courses/371c/project/2016F/Borgfeldt_GIS_Project.pdf

[84] https://en.wikipedia.org/wiki/Wharton_Basin

[85] http://advances.sciencemag.org/content/3/1/e1601689

[86] http://www.earthobservatory.sg/blog/magnetic-anomalies-wharton-basin-part-1-2

[87] https://en.wikipedia.org/wiki/Devil%27s_Sea

[88] https://en.wikipedia.org/wiki/Kamikaze_(typhoon)#Events

[89] https://www.researchgate.net/publication/32992822_Gravity_measurements_in_Loyalty_archipelago_sc

[90] http://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_5/b_fdi_12-13/16438.pdf

[91] http://newcaledonia.southpacific.org/loyaltyislands/mare.html

[92] http://oceans1.customer.netspace.net.au/pacific-wrecks.html

[93] https://en.wikipedia.org/wiki/1953_Suva_earthquake

[94] http://oceans1.customer.netspace.net.au/pacific-wrecks.html

[95] https://en.wikipedia.org/wiki/List_of_earthquakes_in_1955#November

[96] https://en.wikipedia.org/wiki/Vile_vortex

[97] https://en.wikipedia.org/wiki/Hawaiian%E2%80%93Emperor_seamount_chain

[98] https://www.muaisa.org/vortex

[99] https://www.amazon.com/Collapse-Societies-Choose-Succeed-Revised/dp/0143117009/ref=sr_1_1?ie=UTF8&qid=1503257199&sr=8-1&keywords=collapse+jared

[100] https://www.amazon.com/Statues-that-Walked-Unraveling-Mystery/dp/1619020203/ref=sr_1_sc_1?s=books&ie=UTF8&qid=1503257401&sr=1-1-spell&keywords=stautes+that+walked

[101] https://www.sciencedaily.com/releases/2017/07/170710161438.htm

[102] https://gutsytraveler.com/energy-grids-vortex-geometric-points-on-easter-island/

[103] https://en.wikipedia.org/wiki/Nazca_Lines

[104] https://en.wikipedia.org/wiki/Walter_Guyton_Cady

[105] https://en.wikipedia.org/wiki/Colpitts_oscillator

[106] https://www.comsol.com/paper/download/152989/prakash_presentation.pdf
[107] https://en.wikipedia.org/wiki/Skyquake
[108] https://fas.org/irp/agency/dod/jason/sound-light.pdf
[109] https://en.wikipedia.org/wiki/Telluric_current
[110] https://www.amazon.com/Fog-Published-Phenomenon-MacGregor-2005-09-08/dp/B01N8U9JC4/ref=sr_1_2?ie=UTF8&qid=1503838448&sr=8-2&keywords=the+fog+gernon
[111] https://www.amazon.com/Beyond-Bermuda-Triangle-Bruce-Gernon-ebook/dp/B073DF2HYJ/ref=sr_1_1?ie=UTF8&qid=1503838496&sr=8-1&keywords=the+fog+gernon
[112] http://www.pilotfriend.com/aircraft%20performance/Beech/27.htm
[113] https://www.eapisfile.com/Docs/International/Bahamas/AOPA%20Bahamas%20Flying%20Guide.pdf
[114] https://en.wikipedia.org/wiki/Atlantic_Undersea_Test_and_Evaluation_Center#Brief_history_of_AUTE
[115] https://en.wikipedia.org/wiki/Atlantic_Undersea_Test_and_Evaluation_Center#In-air_tracking
[116] https://fas.org/nuke/guide/usa/airdef/an-fps-35.htm
[117] https://wikivisually.com/wiki/AUTEC
[118] http://news.northropgrumman.com/news/releases/northrop-grumman-selected-as-the-preferred-supplier-for-the-autec-electronic-warfare-simulator-enhancement-program
[119] https://en.wikipedia.org/wiki/Duga_radar
[120] https://en.wikipedia.org/wiki/Duga_radar
[121] https://en.wikipedia.org/wiki/Hessdalen_lights
[122] https://en.wikipedia.org/wiki/1971_San_Fernando_earthquake
[123] https://en.wikipedia.org/wiki/Philadelphia_Experiment
[124] https://www.amazon.com/Philadelphia-Experiment-Invisibility-Startling-Vanished/dp/0449007464/ref=sr_1_1?ie=UTF8&qid=1504019800&sr=8-1&keywords=berlitz+philadelphia+experiment
[125] https://en.wikipedia.org/wiki/Bill_Moore_(ufologist)
[126] http://www.dtic.mil/dtic/tr/fulltext/u2/a496936.pdf pg. 33
[127] ibid
[128] ibid
[129] http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA618106
[130] https://en.wikipedia.org/wiki/Cavity_magnetron
[131] https://www.history.navy.mil/research/library/online-reading-room/title-list-alphabetically/p/philadelphia-experiment.html
[132] ibid
[133] https://www.history.navy.mil/research/library/online-reading-room/title-list-alphabetically/p/philadelphia-experiment/philadelphia-experiment-onr-info-sheet.html
[134] https://en.wikipedia.org/wiki/Philadelphia_Experiment#Misunderstanding_of_documented_naval_expe
[135] https://en.wikipedia.org/wiki/USS_Timmerman_(DD-828)

[136] ibid
[137] https://www.quora.com/What-was-Project-Rainbow-The-Philadelphia-Experiment
[138] http://www.gravitywarpdrive.com/Philadelphia-Experiment-and-Montauk/Philadelphia_Experiment.htm
[139] http://www.stealthskater.com/Documents/Beckwith_02.pdf
[140] https://en.wikipedia.org/wiki/Edward_Teller
[141] https://en.wikipedia.org/wiki/Hilbert_space
[142] https://en.wikipedia.org/wiki/1952_Washington,_D.C._UFO_incident
[143] https://en.wikipedia.org/wiki/The_Montauk_Project:_Experiments_in_Time#The_Montauk_Gang_cult
[144] https://en.wikipedia.org/wiki/The_Montauk_Project:_Experiments_in_Time

[145] https://en.wikipedia.org/wiki/The_Montauk_Project:_Experiments_in_Time#Book_details
[146] https://en.wikipedia.org/wiki/The_Montauk_Project:_Experiments_in_Time#The_site
[147] https://www.facebook.com/WorldUnsolvedMysteries/posts/670577506340492
[148] https://en.wikipedia.org/wiki/Montauk_Air_Force_Station
[149] ibid
[150] https://en.wikipedia.org/wiki/Cronut
[151] https://pdfs.semanticscholar.org/8338/ae6104b1574c785492e24c79d4ab2d0e4642.pdf
[152] https://en.wikipedia.org/wiki/PBM
[153] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3002207/
[154] https://justgetflux.com/
[155] https://iristech.co $10 for the “Pro” version
[156] https://www.amazon.com/ADLENS-EM02-CG-NA-YL-Interface-Computer-Eyewear/dp/B00QKV1C3C/ref=sr_1_2_a_it?ie=UTF8&qid=1504280550&sr=8-2&keywords=adlens+computer+glasses
[157] https://optometry.nsuok.edu/Portals/5/PDF%20Files/Clinics/BA/Eye%20Suppplements%20for%20AM
[158] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5436183/
[159] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5007141/
[160] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2606324/
[161] http://healingtools.tripod.com/light_history.html
[162] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1297510/
[163] https://www.scribd.com/doc/3277374/The-Principles-of-Light-and-Color-by-Edwin-D-Babbitt-1878
[164] https://en.wikipedia.org/wiki/Niels_Ryberg_Finsen
[165] http://aetherforce.com/1000-years-ahead-the-spectro-chrome-color-healing-system-part-1-by-mark-fischer/
[166] https://www.amazon.com/dp/B00898JLS2/ref=dp-kindle-redirect?_encoding=UTF8&btkr=1
[167] http://www.ottlite.com/Get-Inspired/Ottlite-Blog/Article/145/Full-Spectrum-Lighting
[168] https://www.phrases.org.uk/meanings/in-the-pink.html

[169] https://www.amazon.com/Graham-Hancock/e/B004561L0S
[170] https://en.wikipedia.org/wiki/Charles_Hapgood#Polar_shift
[171] https://en.wikipedia.org/wiki/Mu_(lost_continent)
[172] https://en.wikipedia.org/wiki/Lemuria_(continent)
[173] https://en.wikipedia.org/wiki/Atlantis
[174] https://en.wikipedia.org/wiki/Lighthouse_of_Alexandria
[175] http://www.livephysics.com/physical-constants/optics-pc/wavelength-colors/
[176] https://www.ncbi.nlm.nih.gov/pubmed/27661759
[177] https://www.ncbi.nlm.nih.gov/pubmed/27622977
[178] https://www.ncbi.nlm.nih.gov/pubmed/27575834
[179] https://www.ncbi.nlm.nih.gov/pubmed/27324946
[180] https://en.wikipedia.org/wiki/Terahertz_radiation
[181]
[182] http://www.hutchisoneffect.com/Press.php
[183] http://www.skepdic.com/hutchisonhoax.html
[184] https://en.wikipedia.org/wiki/William_Crookes
[185] https://en.wikipedia.org/wiki/X-ray#Discovery
[186] https://en.wikipedia.org/wiki/Roentgen_(unit)
[187] http://science.howstuffworks.com/10-inventions-thomas-edison10.htm
[188] https://en.wikipedia.org/wiki/Electronic_voice_phenomenon
[189] https://www.amazon.com/gp/product/1846943639/ref=oh_aui_search_detailpage?ie=UTF8&psc=1
[190] http://www.nydailynews.com/life-style/intuition-personal-gps-long-term-satisfaction-article-1.3554586
[191] https://www.amazon.com/Currents-Death-Paul-Brodeur/dp/0671678450/ref=sr_1_1?s=books&ie=UTF8&qid=1504461510&sr=1-1&keywords=currents+of+death
[192] https://www.ncbi.nlm.nih.gov/pubmed/28791963
[193] https://www.ncbi.nlm.nih.gov/pubmed/18937345
[194] https://www.ncbi.nlm.nih.gov/pubmed/27738269
[195] https://www.ncbi.nlm.nih.gov/pubmed/26206279
[196] https://en.wikipedia.org/wiki/Superheterodyne_receiver
[197] http://www.ohio.edu/people/postr/bapix/nc173.htm
[198] http://www.obairlann.net/reaper/ham/s-38c/
[199] https://nlo.stanford.edu/content/optical-frequency-mixers-using-three-wave-mixing-optical-fiber-communications
[200] In music, a glissando [glisˈsando] (plural: glissandi, abbreviated gliss.) is a glide from one pitch to another (Play (help. · info)). It is an Italianized musical term derived from the French glisser, to glide. In some contexts, it is distinguished from the continuous portamento. Feel better?
[201] https://www.amazon.com/Dreams-Original-Dreaming-Supplement-Handbook/dp/B005EV7DJQ
[202] https://en.wikipedia.org/wiki/Alpha_wave

[203] https://en.wikipedia.org/wiki/Mu_wave

[204] https://www.psychologytoday.com/blog/media-spotlight/201211/implanting-false-memories

[205] http://science.sciencemag.org/content/341/6144/387.full

[206] https://www.holosonics.com

[207] https://www.holosonics.com/

[208] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4552256/

[209] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1073075/

[210] https://www.spreeder.com/cx/

[211] http://weldingdesign.com/archive/welding-and-wwii

[212] https://en.wikipedia.org/wiki/Fleming%27s_left-hand_rule_for_motors

[213] http://planepower.aero/

[214] In a 9/6/2017 email to the author

[215] https://books.google.com/books?id=IFikVd65GeMC&pg=PA216&lpg=PA216&dq=david+hatcher+childress+250+meters+cliff&sourceCT0Q6AEIQTAK#v=onepage&q=david%20hatcher%20childress%20250%20meters%20cliff&f=false

[216] http://www.megageometry.com/2013/03/tibetan-monks-and-geometry-of.html

[217] Teknik i forntiden. By Kjellson, Henry & Mattsson, Carl-Anton. Nybloms förlag.Stockholm.1985.

[218] https://en.wikipedia.org/wiki/A440_(pitch_standard)

[219] ibid

[220] https://acousticengineering.wordpress.com/tag/432-vs-440-hz/

[221] https://en.wikipedia.org/wiki/Rayl

[222] https://books.google.com/books?id=HmNZuy053foC&pg=PA207&lpg=PA207&dq=piezo+properties+of+metals&source=bl&ots=vp-60u8ZSO&sig=R1IKxz9gzu8jwKhZ2lYqAthe2uA&hl=en&sa=X&ved=0ahUKEwjml_zW94TXAhXG

[223] https://en.wikipedia.org/wiki/Acoustic_impedance

[224] https://en.wikipedia.org/wiki/Boundary_layer#Aerodynamics

[225] https://en.wikipedia.org/wiki/Battle_of_Jericho

[226] https://www.biblegateway.com/passage/?search=Joshua%206

[227] https://www.bibliotecapleyades.net/ciencia/antigravityworldgrid/ciencia_antigravityworldgrid08.htm

[228] Day Reims 1899 American version https://www.biblegateway.com/passage/?search=Joshua%206&version=DRA

[229] Then Joshua the son of Nun called the Priests and said unto them, Take up the Ark of the Covenant, and let seven Priests bear seven trumpets of rams' horns before the Ark of the Lord.

[230] https://www.biblegateway.com/passage/?search=Joshua+6&version=YLT

[231] Leviticus 16:2 "And Yahweh said to Moses, "Tell your brother Aaron that he should not enter at any time into the sanctuary behind the curtain in front of the atonement cover that is on the ark, so that he might not die, because I appear in the cloud over the atonement cover."

[232] https://www.wunderground.com/history/airport/KPBI/1970/12/1/DailyHistory.html?req_city=&req_state=&req_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=

[233] https://www.wunderground.com/history/airport/KMIA/1970/12/1/DailyHistory.html?

req_city=&req_state=&req_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo=
[234] http://www.vibrationdata.com/Newsletters/January2007_NL.pdf
[235] Ibid (personal email from Gernon 9/7/2017 cited earlier)
[236] https://en.wikipedia.org/wiki/Lenticular_cloud
[237] http://www.vibrationdata.com/Newsletters/January2007_NL.pdf
[238] ibid
[239] http://www.megageometry.com/2013/03/tibetan-monks-and-geometry-of.html
[240] Beyond Strange: True Tales of Alien Encounters and Paranormal Mysteries, Crossroad Press 2017
[241] Technical Advisory T5040.30 concrete expansion joints
https://www.fhwa.dot.gov/pavement/t504030.cfm
[242] https://www.fhwa.dot.gov/pavement/concrete/pubs/hif12039/hif12039.pdf
[243] https://www.mazdas247.com/forum/showthread.php?123787078-What%92s-your-RPM-when-going-60-70-80-MPH
[244] https://en.wikipedia.org/wiki/Coral_Castle
[245] https://www.livescience.com/41075-coral-castle.html
[246] https://www.livescience.com/680-mysterious-coral-castle-fanciful-myth.html
[247] http://www.rexresearch.com/maxwell1/maxwell1864.doc
[248] https://en.wikipedia.org/wiki/Inductor#Q_factor
[249] https://en.wikipedia.org/wiki/Schumann_resonances#Dependence_on_global_lightning_activity
[250] http://www.newtonproject.ox.ac.uk/view/texts/normalized/THEM00276
[251] https://urbansurvival.com/coping-hacking-space-time-ark/
[252] http://m.thechronicleproject.org
[253] https://en.wikipedia.org/wiki/Inverse-square_law
[254] Confidential source [redacted]
[255] http://www.thechronicleproject.org
[256] http://aip.scitation.org/doi/abs/10.1063/1.2436470?journalCode=php
[257] https://en.wikipedia.org/wiki/Mercy_seat
[258] https://www.amazon.com/Cosmic-Winter-Victor-Clube/dp/0631169539
[259] Vimana in ancient India: Aeroplanes or flying machines in ancient India
[260] https://www.biblegateway.com/passage/?search=Exodus+29&version=GNV
[261] https://www.biblegateway.com/quicksearch/?quicksearch=burnt+offering+work&version=DRA&resultspp=25
[262] https://www.biblegateway.com/passage/?search=Revelation+9:13&version=DRA